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PROFESSIONAL RECOLLECTIONS
ON
AMANSHIP, DISCIPLINE, &c.
BY
CAPTN. F. LIARDET R.N.

49. 325.

49. 325.

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PROFESSIONAL RECOLLECTIONS

ON

POINTS OF SEAMANSHIP,

DISCIPLINE, &c.

BY

CAPTAIN FRANCIS LIARDET,

R. N.

PORTSEA:

WILLIAM WOODWARD, COMMON HARD.

LONDON: LONGMAN AND CO.

1849.

TO

CAPTAIN H. O. LOVE, R.N.,

WHOSE ABILITIES AS

A FIRST RATE SEAMAN, AND HIGHLY TALENTED

AND SCIENTIFIC OFFICER,

THIS BOOK

IS DEDICATED, AS A SMALL MARK OF ATTACHMENT

TO AN

OLD SHIPMATE, AND WELL TRIED FRIEND,

BY THE AUTHOR.

PREFACE.

THE object of these few pages originated in a wish to write something that might be professionally beneficial to my step-son; but while truly anxious to carry out my views to suit the young Middy, my mind invariably led me to recollections of practical experience, which I feel has, on some occasions, induced me to touch on subjects not exactly connected with the Professional improvement of youngsters.

I own I feel great difficulty in mustering up sufficient courage to appear before the Officers of the Navy as an Author; yet, whatever may be the merit or demerit of the Work, I rest assured their criticism will be tempered by that indulgent and liberal consideration, for which the Profession is so eminently distinguished.

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Professional Recollections

ON

SEAMANSHIP, DISCIPLINE,

&c., &c.

Anchoring with guns.

It has often happened that vessels of war, from previous loss of anchors, have been compelled to add to their security by the aid of guns. All the anchors you have are down, the ship drifting, and too much wind to weigh or slip with any chance of safety, I see nothing left for it, but to endeavour to bring the ship up with her guns. Make up your mind quickly as to the number of guns you think will be sufficient to hold the ship, run your hemp cable up to the spare hawse-hole on the side you think it will be advisable to let your guns go from; from aft over the main-deck guns outside, pass a hawser, which bend on to the hemp cable, haul as much of the end of the cable aft over as many of the main-deck guns as you wish, cross-lash the cable to the guns as near as convenient

to the ship's side, unreeve the breechings from the breeching-rings, pass a strong lashing through each breeching-ring to the cable; when quite ready, throw your guns overboard together, and veer as the vessel drives, and you have a very good chance of saving your vessel. In such cases, it will be best to have the rope as dry as possible, as the lashings will tauten so much more under water, from that circumstance. It will also be well to protect the lashings on the guns as much as possible, from the ground. When you weigh your guns, as they come to the hawse-hole sling them, and run them up with the cat high enough to be taken in through the bow-port; most likely a tackle from the bowsprit will be required to keep them fair for entering the bow-port; have a good fore-and-aft tackle to run them inboard, then mount them, and put them in their places.

Using an anchor on a dark night, with conflicting currents or tides, in narrow channels.

It has often occurred to me that ships are frequently lost in narrow waters, from conflicting currents, which render it almost impossible to know the situation of the vessel. The Bahama Channel is one of the places such as I allude to. My proposition is merely for light winds or calms, a time when vessels are driven about in such places at the mercy of currents or tides. I suppose the water to be deep at the time. I should think the following plan would be found useful. Furl all sails, then ease the stream anchor down with the chain cable to about forty or fifty fathoms; this will be a better tell-tale than the lead, for the moment the anchor touches the ground, the whole watch will feel it immediately. This will give you a much better opportunity of coming-to with your bower anchor, when you think it right to do so. The stream cable should be taken through the spare hawse-hole, and the

bower anchor should be let go on the opposite side to the stream anchor, if possible. We have heard of several vessels being lost in a similar situation, that we have every reason to believe might have been saved, had they taken the precautions here proposed.

On the best sail to bring a ship to anchor under.

It has appeared to me, that with a commanding breeze, the three top-sails, jib, and driver, are the most seamanlike sails to bring a ship to an anchor under. I advance this opinion with the greatest deference to many good officers who continually bring their ships to an anchor under a heavy press of sail, with the view of shortening all sail at once. No one can doubt the beauty of this evolution; it is one that astonishes all but the initiated; in reality it is frequently a manœuvre of the greatest trickery, such as singling top-sail sheets, clewing the top-sails up to the caps with burtons, stopping the hauling parts of the top-sail buntlines to the yards, so as to make the weight of the top-sail yards haul up the buntlines at the same time; and in this way the top-gallant yards clew up the royals, and the top-sail yards clew up the top-gallant sails, the clewlines being previously marked before being stopped, to allow for the different lengths of the masts, &c. If a ship take in all sail in the manner I have described, I ask any sailor, is it possible for that ship, with all her unnecessary gear, single top-sail sheets, &c., to make sail again as quickly, if required, as the ship which comes to an anchor under manageable sail, without the aid of trickery? If you add to the above, studding sails lying about the decks, with the frequent occurrence of carrying away anchors or cables, torn sails, and sometimes loss of life, &c. I have observed, that ships which practised this manœuvre most, were

generally those that were the most out of their station, and often obliged to unmoor to take up a fresh berth. A ship should take in her studding sails, royals, and flying jib, well together, and have her studding sails quickly in their places; next take in courses and top-gallant sails with a good clear run, furling the top-gallant sails immediately, then take up your berth under the three top-sails, jib, and driver, and, if you can, run your cable out without the assistance of your sails; take them all in together, to the word "Lower away," or "square away," minding to have the squaring marks of your lifts and braces in at the same moment. From what I have said, I do not wish to infer that in single ships the men should not frequently be practised in taking in all possible sail together. I only mean to observe, that in a Fleet, with a commanding breeze, ships will take up their stations better under their three top-sails, jib, and driver; and if they get into danger, they will be more manageable and more ready to make sail to get out of it. In ships where they are in the habit of making running moors with fresh way on the ship (though the defects in this mode of mooring a ship may not be observed in the anchors, cables, or on the copper at the time of weighing), still we think, if this subject were closely analysed, that it would be found that those vessels which continually practice this evolution, have had more casualties with their anchors or cables, than other ships not following this manœuvre. It must be remembered that snubbing a vessel with a chain cable brings the strain more directly on the anchor, and that chain cables are more liable to injury from sudden jerks, than rope cables, more particularly when snubbed at a short scope with the force of a ship's fresh way.

When a ship is making a running moor, and happens from some accident to be brought up all standing, or greatly

checked in running out her cables, it would perhaps be well to take an early opportunity of *sighting the anchor and examining the cable.*

To remove a waist anchor to the opposite bow.

We will suppose you wish to remove the starboard waist anchor to the port bow, pass the small bower cable round the bows, under the best bower cable, and shackle it on to the starboard waist anchor; when everything is quite ready, ease down the waist anchor, bring-to the messenger for the small bower, heave the anchor up, cat and fish it to the port bow. If at sea, the cable should be well bitted and stoppered abaft the bitts, previous to easing down the waist anchor; and if at anchor, you may perhaps have to veer the best bower a little, to enable you to weigh the small bower with greater ease. I have done this, and found it a very easy way of shifting an anchor. I should even prefer shifting an anchor from aft to forward on the same side in this manner, to moving it with the yards and stays.

To recover a vessel to an upright position on an anchoring ground.

It sometimes happens from a sudden squall of wind, a vessel is thrown on what is commonly called her beam-ends, which to the best of my judgment means, that she is too much on her side for the rudder to be useful to her. When a vessel is so situated, and in a place where you can make use of an anchor, one had better be let go as soon as possible; by this means the ship will come head to wind and upright. Vessels have often been brought upright by these means. I have only seen one instance of the recovery of a vessel by an anchor in this situation, but have heard and read of many.

Remarks on three cables on end on one anchor, and three anchors with one cable each.

The seamen of the last war were convinced, from the long experience they had in blockading the enemy's fleets in all weathers, that a ship will ride better and longer with three cables on one anchor, than three anchors with only one cable each. With rope cables it must be admitted, that the experience of our best seamen appears to prove this beyond a doubt.

Earl St. Vincent had a very high opinion of this mode of riding out a gale with his Fleet, which he frequently did off Cadiz. The Coast of Holland, we believe, has been most famous for anchoring with a large scope of cable on one anchor. It appears that the elasticity of the rope cable, when compared with the chain, was favorable to the anchor; for since the introduction of chain cables, the anchors have undergone a great change in their shape. It being proved by experience, that the long-shanked anchors were very good for rope cables, but when used with chain cables, the moment the chain was hove-in to a short scope, the elasticity of the rope cable was wanting; therefore the shanks and arms of these anchors were frequently bent or broken; in consequence of which, and the extreme force with which the crown of the anchor sometimes struck the ground, the shape of the anchor to be used with chain cables was materially altered; the shank was shortened and made stouter, and the crown much more rounded. Instead of the ring, a Jew's-harp was substituted. The compactness of the present anchor has made up in a great measure for the want of elasticity in the cable. By strengthening all the weak points of the old anchor, when applied to chain cables, the anchor has been found to resist the power of a short scope of cable much better, and we believe not more liable to be broken, than the old anchor with the

rope cable. Before chain cables were better understood, anchors were frequently broken from having too large a range of cable; it is now generally admitted by the best seamen, that a sufficient range before the bitts, so as to allow the anchor to fall clear of the fore-foot before being checked, with the cable bitted, is by far the best method for letting go an anchor with a chain cable. As a long scope of rope cable on one anchor has proved itself superior to a short scope, on several anchors, we think with chain cables this principle is still more apparent; for when you take into consideration the difference of weight the ship has to lift between the rope cable and the chain, it is but reasonable to conclude that the ship will lift one cable easier than three. If you do not give a good scope of chain cable, you endanger the anchor, and make the ship ride uneasy; with a long scope of chain cable the ship is eased in every pitch, and is more secure, from the greater scope of cable on the ground. We have often heard it advanced, that with chain cables there is very little occasion for mooring, as a ship will seldom, if ever, go near her anchor. We have known and heard of several instances to the contrary of this opinion. In the Rio de la Plata the captains of vessels generally consider themselves perfectly safe with a long scope of cable at single anchor. This fancied security arises from an opinion that the bight of the chain will not drag through the mud; and no doubt it is much less likely to do so, when the bottom is very muddy; still, ships have been known here to hurt themselves considerably by grounding on their anchors. A practical seaman will see immediately, according to the place and weather, if the ship should ride with a long scope of cable on one anchor, or be moored.

At single anchor.

Whenever you have reason to suppose that the ship has broken her sheer, it will be advisable to sight the anchor as

soon as possible. There are many anchorages where the bottom is so muddy, that the vessel will seldom foul the anchor, as the mud generally offers sufficient resistance to keep the bight of the cable clear of the anchor; still, if the water is very shallow, as in the Rio de la Plata, and other places, this will not prevent a vessel from grounding on her anchor. If possible, always sheer a ship on the same side of her anchor each tide; want of attention to this, will sometimes endanger the tripping of the anchor, and if an anchor is tripped out of stiff clayey ground, it will not take hold a second time, unless the upper flukes should cant down, for the quantity of clay sticking to the fluke, prevents its setting into the ground again, so the anchor keeps tripping over the surface, and another anchor must be let go before the ship can be brought up. Since the introduction of chain cables, seamen appear to have thought much less on that beautiful part of a seaman's duty, keeping a ship clear of her anchor: still we have seen several ships endangered from want of attention to this subject, though we are free to admit, that, from the weight of the chain cable, there is not exactly the same necessity for it; but, whenever the wind or tide is sufficiently strong to move the bight of the cable over the ground, attention must be paid to keeping the anchor clear.

To back an anchor with the buoy-rope.

The backing-anchor is carried out in a boat to the buoy of the anchor already down, which buoy-rope is cast off, and bent to the small cable or hawser of the backing-anchor; that done, the boat is pulled ahead, until the buoy-rope and cable of the backing-anchor become taut, when it is let go, the buoy that was taken from the large anchor being previously bent to the backing-anchor.

In this situation, should the large anchor come home, the scope of cable from it to the backing-anchor, participating in

the strain communicated to the innermost anchor, therefore checks its progress, and adds to the vessel's security. Backing an anchor with a boat must be done previous to blowing weather coming on. An anchor is sometimes backed in blowing weather, when you have plenty of room to drift, and do not like to risk the ship under sail, and cannot chance the losing of a large anchor: under these circumstances, an anchor is backed by making a traveller on the riding cable, outside the hawse to which the stream cable or hawser of the small anchor you wish to let go is made fast, the other end to be bent to the anchor, which should be ready to let go from the opposite bow to the riding cable (if possible), and the head-yards braced abox, so as to assist the ship while driving to clear the backing-anchor: this being done, the anchor is let go under foot, the ship then, in driving, drags the cable through the traveller of the backing-cable, till the anchor is brought up by the backing-anchor.

When the backing-cable becomes quite taut between the two anchors, the ship will have a better chance of bringing up, or certainly of driving less.

Steadying a ship at anchor.

Ships are frequently obliged to anchor in an open roadstead in moderate weather: in this case, the ship will generally have great rolling motion; to obviate this motion, it will be found a good thing to set the main-top-sail braced sharp up, and the top-gallant-sail if requisite: but, should you wish to use the main-yard for hoisting in treasure, provisions, or water, you had better set the fore and mizen-top-sails braced up contrary ways. For instance, how often you will find a ship rolling, so circumstanced, when, the moment her sails are set for casting, she becomes perfectly quiet. It often becomes a very dangerous affair from the ship's rolling, to hoist in or out boats on an open coast, at anchor. Perhaps it would be

better to try sail on the fore and mizen-mast, to steady her previous to this evolution, as, when the ship rolls heavy, you endanger spars, boats, and lives.

Stowing stream and kedge-anchors.

The plan of stowing the stream and kedge-anchors on the waist-anchors, is a very common, but we think, not a good plan: with the present chain fore-gangers, you can always keep your sheet-cables bent, without injury to the rope, and with Mr. Brown's invention, you can now let go your sheet-anchors nearly as quick as your bower-anchors; this being the case, it is quite time the stream and kedge-anchors should find some other place, or, in some case of great emergency, they will all be let go together. Long before the waist-anchors were made so handy for letting go, I have heard many good officers disapprove of stowing the small anchors on the waist-anchors, giving the preference to the chains for that purpose; others put the kedges in the chains, and the stream up and down the after part of the main-hatchway, handy for hoisting out. As the readiness of the waist-anchor has been so much improved, it is not giving them fair play to stow the small anchors on them while the ship is at anchor, at least.

Anchoring on a muddy bottom.

An opinion has gained ground very generally amongst seamen since the introduction of chain cables, that whenever you anchor your ship on a muddy bottom, all that you have to do, is to give the ship a long scope of cable, and then she is perfectly safe, as far as the anchor and cable are concerned. My experience has led me to form a different opinion. We will suppose a ship to be riding by the bight of her chain cable, and the water rather shallow, it comes on to blow hard, the ship continues to ride by the bight of her cable, until a heavy

swell gets up, the ground-swell soon detaches the mud from the riding part of the cable, until, by degrees, the ship brings her anchor right ahead; at this moment, if it continue to blow, a second anchor should be let go, before veering on the first cable, as many ships have been much endangered from trusting too much to one anchor with a muddy bottom.

For the longer the swell keeps up, the thinner the mud will get, more particularly where it comes in contact with a hard substance, like an anchor and cable, consequently, as the mud loosens, the anchor becomes more insecure, until the ship at last drags her anchor; under these circumstances, from the state of the bottom, it is often difficult to bring a ship up, even with a second, or, sometimes a third anchor. What I wish to explain, is, that a muddy bottom with a heavy swell is not so safe as it is generally supposed to be: this arises from the agitated state of the mud at the bottom, until the anchor will no longer hold the strain of the ship; therefore I am of opinion, if a second, and perhaps even a third anchor is not let go in time, when the bottom is in the state I have described it, that it will be difficult to bring a ship up, when she has once commenced to drag her anchor.

On making alterations in masts, yards, sails, &c.

Most alterations in a ship involve so many others, that it is difficult to know where they will end. I have formerly seen several ships, in which they shifted the main top-gallant-yard for a fore top-gallant-yard; the fore top-gallant-yard for a mizen top-gallant-yard; then the main top-gallant-yard was obliged to be made out of a spar, I believe generally sufficiently large to make a mizen top-sail-yard, then the main top-gallant-sail was made larger to correspond with the rest of the top-gallant-sails; the main top-gallant-sail was made larger in the head, with very little alteration in the foot; the fore and

mizen were both reduced in the foot, but kept the same in the head, or that would have involved larger top-sail-yards. In some ships it did not finish here; in the next place it was thought right to give the top-gallant-masts a little more diameter; in giving the top-gallant-masts more diameter the top-gallant-caps were weakened; still the same caps had larger masts and yards to support. Next came the royals to be altered, and many other things, such as larger ropes, &c.: after all these alterations, the sails could not be carried so long as before, and never looked as well. This plan looks very much like making a man weak, but still expecting him to carry a larger head on his shoulders. Then came the sending up and down of such monster yards, that in exercising with other ships, if men under such circumstances were beaten, I for one, should consider it no discredit to them. I merely take notice of these extreme cases, to point out the necessity of considering well, previous to making any great alterations in a ship's spars, rigging, or sails. I have heard several of our best officers say, in their opinion, that the masts, rigging, and sails of the present day came nearer perfection than they had ever known them.

A sea anchor.

This anchor may frequently be of the greatest possible use; it ought to be made in the following manner:—take three spare spars, or top-gallant studding-sail booms will be sufficiently large; with these spars form a triangle, the size you think will be large enough, when under water, to hold the ship; cut these spars to the required length, before or after cross-lashing them well at each angle; then make fast your spans, one to each angle, so that they will bear an equal strain when in the water; but should your spars be weak, you should always increase the number of spans according to their weakness, fill up the centre of the triangle with strong canvass,

having eyelet holes round its sides, about three inches apart, to which eyelet holes attach the canvass well to the spars; at the back of the canvass pass many turns of inch or inch and a half, net fashion, of course. A proper net would be preferable to rope so expended. To the base of the triangle attach a weight, or small anchor, supported in the centre of the base by a span running from each of the lower angles. To the first-mentioned spans make fast the stream cable; when every thing is quite ready, hoist or put it overboard from the place you think it will answer best. I have every reason to believe, with this anchor under the trough of the sea, and 70 or 80 fathoms of stream cable out, that a ship's drift would not be very great. I have tried a similar contrivance twice, and it answered beyond my expectations. The plan I propose would be of the greatest advantage to dismasted vessels, and vessels which have lost their rudders, &c. It appears preferable to riding by spars, as the spars drift so much faster than the sea anchor, which I have described, from its being well under the trough of the sea, so makes great resistance to the drift of the vessel. The reason I propose a triangular form in preference to the square is, that the trough of the sea may strike as lightly as possible, should the upper angles at any time approach the trough of the sea while riding at anchor. I am fully aware that a square might be so placed as to have one of its corners up in the same manner as the triangle, but then you would lose the base in the very place you want the greatest resistance, if you make a square; one which I feel confident would not answer as well as the triangular shape. If a ship should approach the shore with this sea anchor down, it would enable her to bring-to with her proper anchors much easier than if the sea anchor had not been down. She might let go her proper anchors and veer from the sea anchor, until she had sufficient cable out, which would give her a much better chance of holding. The sea anchor should have a buoy

and buoy-rope sufficiently long to let the anchor go well under the trough of the sea.

Anchoring in rivers, or places where fire-rafts may be expected.

Fire-rafts are seldom made use of by an enemy, excepting where there are tides or freshes, to insure their drifting towards the object they wish to destroy. We think the following suggestion may be useful in keeping off fire-rafts, &c. Anchor a boat some distance ahead, but in an exact line with the ship; this boat should be anchored with the stream anchor and stream chain cable; the cable should be shackled to the bottom-rings and bow-rings, lashings being so liable to be soon burnt. As fire-rafts, or floating bodies nearly flush with the water, intended for explosion, are generally attached in pairs or more, so that the chain or whatever they may be attached by will take across the cable, and as the freshes or tides carry the floating bodies down, they close round the ship, and either endanger her taking fire, or being hurt by explosion—my intention in having the boat ahead is, that it may receive what is intended for the ship, and thereby give timely notice. In such a place the fire-booms, and all spars that can be used for that purpose, should be kept perfectly ready. Every means for extinguishing fire or prevention of explosion should be put in requisition. A good spring should be bent on to the cable from aft (the part near the cable should be chain, if possible) and everything quite ready for slipping the cable. The spring is intended to swing the ship by, if found requisite to drop lower down, by being towed by the boats, or under sail. The fire-grapnels could be used by the boats in towing the fire-rafts clear of the ship, if required, by throwing the grapnel so as to hook the raft, and tow by the chain. The exact bearings of the boat should be taken

to insure the steady steering of the ship in case it should come too dark to see the boat; a ship from her masts, yards, and sails, &c., being so much more liable to sheer about from flaws of wind, than a boat. However, should you have any fears about the boat being unsteady, you have only to tow two good strong buckets, one on each quarter of the boat, with a few fathoms of line, and that will go far to make her steady.

To prevent surprise at anchor.

It appears to me that every vessel of war should have some arrangement to repel boarders, if surprised at anchor. In places where you are in the least liable to such surprises, every man should take charge of his own cutlass. Beckets should be fitted over each man's hammock, to contain his cutlass, scabbard, and belt, so as to be taken up or down with the greatest possible ease. Should any alarm be given, this precaution will make the men feel confident in themselves. The marines should have their cartouche boxes filled with ball cartridges, and muskets quite handy. Every man being so far ready, they would run to the great guns, or small arms, according to orders. Everything being previously arranged by station-bill for ship surprised. The crews of the vessels employed in the West Indies for the Suppression of Piracy, from 1822 to 1825, had a bayonet and scabbard always attached to the cutlass belt. The bayonet had a becket worked to it, like the cutlass, sufficiently large to go firmly on the wrist. The men were taught to use the bayonet in the left hand, while attacking or repelling the enemy with the cutlass; and in this way the bayonet was always in its proper place, if required to be used with the musket.

Sheet anchor.

From unavoidable circumstances, ships are sometimes obliged to let go a sheet anchor nearly in a line with the

riding cable. If a sheet anchor is obliged to be let go in this manner, it will be worth the consideration of seamen, whether the buoy-rope should not be taken off previous to letting go the sheet anchor; as the buoy-rope of the sheet anchor, under such circumstances, has frequently so entangled itself round the riding cable, as to make the holding of the sheet anchor unsafe, and endanger the breaking of the riding cable, by the jerks of the buoy-rope. Allowing that the sheet anchor should be let go rather wide of the riding cable, still, if the length of the buoy-rope is not attended to, it may yet endanger the tripping of the sheet anchor. Rope cables after a hard gale of wind, have been found much cut and injured, from the buoy-ropes of sheet anchors. From what we have stated, it appears that the buoy-ropes on sheet anchors are not at all times a safe practice; still we have seen many seamen most anxious that the sheet anchor, before letting go, should have a new buoy-rope, or at least the strongest that could be procured in the ship.

When obliged to anchor in a thronged roadstead in blowing weather.

If possible in this situation, never let go a second anchor unless absolutely necessary: for with a second anchor down, if a vessel should happen to drift athwart your hawse, you may be obliged to part with both anchors and cables. But should your vessel be in the hawse of another ship, it will then be necessary to let go a second anchor. Besides, ships ride much easier with a good scope of cable on one anchor, than a short scope on two anchors. By a thronged roadstead, we mean one where vessels are continually arriving for shelter during blowing weather. In such a situation, you may often be endangered by merchant vessels anchoring in your hawse, and not particularly well found with ground tackling.

On anchoring broadside-on to the wind in blowing weather.

When anchoring in a gale of wind, and circumstances will admit, it will ease the anchor and cable much, if the ship is laid broadside to the wind before letting go the anchor, the ship will then drift much slower, take her cable more smoothly, and without the fear of sudden heavy jerks, which are so dangerous to cables, more particularly chain cables. When a ship's cable is veered broadside-on to the wind, she takes her cable slowly and quietly when compared with veering end-on to the sea and wind; the cable then seldom or ever requires to be checked until the ship has got her full scope, and she then tautens her cable slowly as she swings gradually head to the wind. Of course everything is supposed to have been snug aloft previously to anchoring, if possible. If the practice of anchoring broadside to the wind were more attended to when anchoring in roadsteads, or where ships have plenty of room, many anchors and cables might be saved: and with the loss of anchors and cables comes the danger of losing the vessel, and with the vessel, often her crew. It should be strongly borne in mind, that when a ship's cable is veered in a gale, head to wind, that while in the very act of veering and checking alternately, the danger of parting becomes tenfold at that time. The necessity of taking from aloft all top hamper previously to anchoring, cannot be too much impressed on the mind of the officer. No one can have been long at sea without having seen many vessels driven on shore for the want of this timely precaution. Merchant vessels, from being short-handed, often keep their spars too long aloft in blowing weather; but in ships of war this excuse cannot be offered. Whatever tends to decrease the strain on a ship's cable in a gale of wind, ought to be viewed as a matter of serious consideration.

A night-anchor-watch in blowing weather.

When an anchor-watch is required on deck from blowing weather, or other circumstances, after hands are placed by the sheet-anchor, look-out-men, leads'-men, &c., it is often thought of little consequence where the other part of the watch lie down, consequently, that part of the anchor-watch not actually on duty, lie down in any direction, wherever they can make themselves most comfortable, but often in most out of the way places; this cannot be considered a desirable way of placing the watch, because, if they are wanted for any case of great emergency, much valuable time is lost before they can be brought to act on the point required. When an anchor-watch is set after the men for duty have taken their stations, the rest of the watch will be much more ready for immediate service when wanted, if mustered and kept together in the most convenient and sheltered part of the vessel, so that they can hear the voice of the officer of the watch, and obey his orders immediately: because, if the ship should break adrift, or other vessels drift near her, minutes then, are worth hours afterwards. Ships, when breaking adrift, have often been saved by the quick setting of the storm-sails: and many vessels have drifted harmlessly by when almost touching each other, from bracing the yards round quickly, or attention to boats, davits, &c. It cannot be too strongly borne in mind, that if in a tide-way, much serious damage may be prevented, if the helm be carefully attended to. At such times, a ship almost invariably has a long scope of cable; and therefore will feel her helm sooner in consequence. My limited experience has induced me to think, that when a ship parts her cable or cables from a fair and heavy strain, if you wish to bring her up again, the letting go of one anchor generally fails to do so; but if the sheet and spare anchor be let go as near together as possible, you do not throw away a chance, and have every

hope that she will ride. Cables are continually carried away, one after the other, from the practice of letting them go singly. Can it be reasonable to expect, that if a vessel part from one anchor, and that she only lets go a similar one with the cable equally good with the one carried away, that she has a better chance of bringing up than before she parted, with the increased strain of stern-way to overcome? But should she carry away her cable from circumstances unconnected with a fair and heavy strain on her cable, it will then be advisable only to let go one anchor. If a vessel should break adrift in blowing weather, and circumstances will permit, supposing the head yards should be braced about to port, the helm would immediately be put hard a starboard; this will help to bring her port broadside to the wind, and if you have plenty of room, it will be well to let her come broadside to the wind previous to letting go an anchor or anchors, according to circumstances. Too much cannot be said in favour of anchoring broadside to the wind, when circumstances will permit its being so.

On coming to an anchor in blowing weather, with a leading wind.

Before taking up an anchorage when blowing hard with a leading wind, if the square-sails can be spared, they had better be furled, and set the storm fore-and-aft sails instead; strike and send down everything from aloft that you think the ship will require when at an anchor. If the place will admit of the ship coming to an anchor under fore-and-aft sails, she will be brought up with considerably less strain on her anchor and cable, and therefore less danger. When the strain on the anchor and cable with the square-sails aback in blowing weather, and the difficulty of furling them is considered, it is wonderful sometimes how anchors and cables can possi-

bly bear so much strain. In such weather, everything that tends to increase the strain on the cable ought to be sent on deck; such as studding-sails out of the rigging, &c. It would be advisable that a ship should even lie-to, or make a board or two, while these precautionary measures are being taken, before she runs down to her anchorage. When the port or anchorage will admit of this being done, it will add much to the safety of the ship.

To recover an anchor by sweeping, &c.

Whenever a ship is at single anchor, it will be frequently of the greatest importance, if the bearings of some particular object right ahead or astern be taken, upon every shift of wind, as it will greatly facilitate the recovery of your anchor in the event of the buoy not watching. It is a good plan upon all occasions of riding a heavy strain, with a chance of parting, to have a mark-buoy, made of a breaker, with a few fathoms more small line wound round it than the depth of water, and a weight attached sufficient to ride by, this thrown overboard the instant the vessel breaks adrift, and the ship's head at the time points out the direction the anchor lies in. As soon as the tide sets from the mark buoy towards the anchor, have two cutters with 60 or 70 fathoms of small line (inch), if partially worn the better, and the hawser you intend to weigh the anchor with; let each boat have an equal quantity of line, and pull away from the mark buoy, reserving enough to reach the bottom; when the line is taut, attach the deep-sea leads, and let each boat veer to the bottom; pull gently with the tide, feeling the leads touching the bottom, and you will be sure to sweep the upper fluke of the anchor. When brought up, keep the boats pulling till they join each other, and then let one boat take both lines, and haul up to the anchor, but not quite up and down; marry the hawser to one end of the line, and haul it round the arm of

the anchor until you get a sufficient quantity of the hawser for weighing; bring the two parts close together, and put a bending shackle and bolt round, to which attach a small line, and let it run down as a jewel, to keep the parts together close to the arm; bring-to, and weigh either by ship or boat.

Anchored in an open roadstead in blowing weather.

If you think it will be best to ride the gale out at anchor, bend all your best storm-sails, and see the stays well greased. Send top-gallant-masts, yards, and flying jib-boom on deck, close-reef the top-sails, take one or more reefs in the courses, then furl the top-sails and courses well. Send all the studding-sails and top-weights not actually wanted, on deck. Lash boats well, and secure everything. Brace the yards for casting the way you wish the ship to go, in the event of the cable parting. If you wish the ship to cast to starboard, have the storm stay-sail sheets and trysail sheets aft on the starboard side; if to port, on the port side. The relieving tackles should be hooked, and the spare tiller aft, on the deck on which it ships. A good seaman in each main-chains, a quarter-master attending the deep-sea lead, the other at the conn, ready to give the word to the helmsman, "hard a-starboard," or "hard a-port," as the case may be, as the ship will be sure to get stern-way first when she parts her cable; the helm should be put hard over either to port or starboard, according to the side on which you wish to cast the ship; of course the watch on deck are to be on the alert ready for anything, and the watch below lying down with their clothes on, ready at a moment's warning. If the ship should part her cable,*

* If you have sea-room, let one watch be employed in heaving in the outer end, while the other watch are making sail, being careful to keep the ship well full, or, the cable dragging on the bottom, will bring her into the wind; if in a critical situation, sacrifice the cable at once by slipping; and it ought invariably

the carpenter is immediately to see the hawse-plugs put in. When the decks are wet, sand them well, so as to insure firm footing for the men, which will give you increased strength for setting your sails, and working the ship off shore.

Anchoring on a lee-shore, and cutting away masts.

When it is impossible to "claw off" a lee shore, and carrying canvass is of no avail, the adoption of the following practice is best calculated to recover the ship from her perilous position. After preparing cables and anchors, so as to be let go alternately, and dropped at a little distance from each other, in a line parallel to the shore, proceed thus. Furl the square-sails as quickly as possible, and brace all the yards full; set all the fore-and-aft storm-sails; put the helm up, so as to keep way on the ship, as the cable of each anchor runs out in succession. The anchor pertaining to the cables on the weathermost hawse-holes, should be dropped first. Give the ship as much cable as her situation will permit, being careful that they all bear an equal strain. If you have not previously had time to make the ship snug aloft, do so immediately. Should the wind increase in violence, so as to endanger the ship driving on shore, her masts had better be cut away immediately. Vessels obliged to anchor on a lee-shore, in very exposed and dangerous situations, in gales of wind, not unfrequently defer cutting away their masts, until it is too late to save the vessel. I much fear that merchant seamen are often obliged to consider too much about the expense of replacing their spars, and loss of freight to the owners, at the very time that the axes should be at work in cutting away the masts. It should be borne in mind, that a square-rigged

to be the practice to have a shackle abaft the bitts, whenever at single anchor, with maul and pins ready for that purpose. No cable ought to be clinched by shackle and pin, but by rope lashing, which can be readily cut, as several vessels have been wrecked from not being able to free themselves of their cables after parting.

vessel will not generally ride above half the strain on her cables after her masts are cut away. When near a rocky lee shore, it is too late to begin with much hope of safety, after the vessel has once commenced to drive; however, even in such cases, cutting away the masts has saved many vessels. If all your anchors are down, and cables out, bearing an equal and very heavy strain, with wind and sea increasing, a dangerous rocky shore, and death staring you in the face, if the vessel drive, cut away your masts immediately; a moment's delay may be fatal to ship, cargo, and crew. I am under an impression, that many vessels, lives, and cargoes, are lost yearly through neglecting this precaution. I do not advocate cutting away the masts except in extreme cases; but when these cases do occur, the officer must be quick in his decision, and prompt in execution, always being careful to keep the lower stays, and as many of the shrouds on each mast fast, as will insure their falling on the side you wish, having previously passed the ends of a hawser between the lanyards of the rigging to be kept fast; this hawser well boused taut, and secured, will enable you to cut away the rigging better after the falling of the masts.

Block ships.

When I first heard that the steam guard-ships were intended to be used as floating batteries for the protection of the coast of the United Kingdom, it then occurred to me, that these ships would be better adapted to the nature of that service, if they were to carry stern anchors. In looking at the *Edinburgh* sometime ago, I could not discover the slightest difference, in working anchors from her stern, any more than from her bows. I think a light cat-head on each quarter, and a light fish-davit, to shift from side to side as wanted, might be fitted withont the slightest inconvenience, and likely to become highly advantageous. The only difference in the stowage of the stern anchors would be, that the stocks must be aft, and the flukes forward; then the stocks would be clear of the quarter-boats, if they should be required to be stocked, and the flukes would have the mizen-chains to rest upon. The stern anchors for a ship of the size of the *Edinburgh*, should, I think, be about the size of the largest corvette class, with an iron stock, so as to lie down when stowed, that the pivot-gun may fire clear of them. The chain cable should always be kept ready for working, and the capstans should be fitted on Mr. Brown's plan, which can be worked either with or without a messenger. Suppose, for instance, the ship to be moored head and stern, the stern anchor might be hove up by the after capstan, and the moment you break ground, you may begin heaving-in the bower cable by the fore capstan, for the purpose of getting under weigh, catting and fishing the stern anchor at the same time. All sailors know the difficulty of working waist or bower anchors for mooring head and stern:

if you are obliged to use a waist anchor for that purpose, the ship cannot be considered ready, until it is re-stowed, and we all know the time it takes to put a waist anchor in its place. It appears to me, as these steam guard ships will frequently have to take up a position moored across harbours, rivers or bays, and in many cases on unprotected parts of the coast, that they should have the greatest facility for working their stern anchors.

On the use of snatch blocks.

Numberless accidents have occurred from the indiscriminate use of snatch blocks. Whenever lashing blocks can possibly be applied to that purpose, they had better be used. Within a very short period, we know of two or three newly commissioned vessels that have lost lives by using these blocks for catting and fishing their anchors; of course you cannot well help using snatch blocks when you wish a block applied to the bight of a hawser or rope; all that we mean to observe is, that in all heavy work, lashing blocks should always have the preference when they can possibly be used. If you cannot avoid using snatch blocks, the greatest possible care should be taken to see that they are properly clamped and pinned.

Boats taking in water in bulk.

Some vessels water in this manner without the least wear and tear of casks, rope, &c. The launch or largest boat you intend for the purpose of watering must be cleared of all her gear of every description; then tow or pull her to the watering place, where she must be well washed out with fresh water several times, until perfectly clean; when done, put the hose into the boat, and merely leave a couple of hands to attend it until the boat is full; then by signal from the shore, or otherwise, send a boat to tow her off to the ship, then pump

the water out of the boat into your tanks, and so on until you complete your water.

Main buntlines.

It appears to me to be a good plan to have the main buntlines to lead aft to the taffrail, as then you have all your force together: in taking in the mainsail with the watch, in bad weather, or otherwise, with this plan, your whole force is continually applied; for, as the men go aft with the clue-garnets, they clap on the buntlines, and as they go forward with the buntlines, they clap on the clue-garnets. I can only add, that on numberless occasions in blowing weather, I always found this plan most useful. Some ships have their fore-topsail braces to lead forward, that the officer on the forecastle may trim or lay the fore-topsail yard as he thinks proper; the brace, in leading down the main-stay in midships, certainly prevents hailing.

Boat tackles.

In fitting boats' tackles, it will be found advisable to have the hooks always on the slings, and the tackles fitted with thimbles to receive the hooks; by this means you will often save the boat's gunwale from being torn out in a sea-way, or when the ship has much rolling motion. For the life-boat, I have generally found it best to hoist her up with tackles, and lower her with runners, so that nothing can possibly hold the boat, as the runners unreeve the moment she touches the water.

On boats leaving the ship from the stern, when other boats are in tow.

Numberless lives have been lost, and boats stove in this manner, in running out of port. This most frequently hap-

pens, while all the officers of the ship are fully taken up with their duty. A person who might come to see one of the officers or men, in wishing to leave the ship, manages to get into his boat by the stern ladder, the moment he is in, the boat is let go; in this case, if the men in the boat are not active, and understand perfectly what they are about, the men and boat will be in a very dangerous position by coming in collision with the boat in tow. I have heard of several accidents of this kind, and seen two in which several lives were lost, and both boats had their broadside torn out. If, at any time, you wish to send a boat away from the ship under the above circumstances, that is, when you cannot stop the ship in a narrow channel, &c., the boat to be sent away, should be veered astern of the boats in tow.

On boats leaving vessels at sea, when hove-to.

If there should be much sea on, and a fresh or strong breeze, it will be desirable at all times, when circumstances will admit, to have a little head way at the time the boat is leaving the vessel, as numberless very serious accidents have taken place from the want of this precaution: I know of several, but will merely mention one, that took place on board a frigate in which I was a midshipman. We had chased a vessel from the morning until a little after twelve o'clock in the forenoon, before we came up with her: the ship was then hove-to, and a boat sent to board her; the moment the boat shoved off, we piped to dinner; the boat soon returned, and was again leaving the ship, but unfortunately, just at the time the boat shoved off, the ship had quick stern way, the stern-fast was dragged out of the coxswain's hands, and the next minute, the boat was cut in two pieces under the ship's cutwater: the mate who had the charge of the boat was drowned, having first endeavoured to save himself by holding on with his hands and teeth by the swab-rope (which happened to be overboard at

the time), but before he could be slung or hauled up sufficiently high for the men to reach him, his teeth were torn out, and his hands gave way. Thus was a very promising young officer launched into eternity! several men severely hurt, and a boat entirely destroyed for the want of attention.

Topsail buntlines.

Frequent accidents take place for want of attention in getting a pull of the topsail buntlines, previous to the men being employed on the lower yards in calm weather, or when the sails are flapping in a head sea, &c. It is not an uncommon occurrence to see courses shifted in such weather: if some of the men do not get hurt with the foot of the topsail for want of this precaution, it must be in having their whole attention directed to keeping themselves clear of it, instead of their energies being applied to the shifting of the sails. I have known several men receive very severe blows from the foot of the topsails. I was midshipman of a frigate when we lost a first-rate seaman, from a blow on the head received by the foot of the fore-topsail when stopping in the studding-sail gear while running into port; and though our own boats, and the boats of the different ships of war were on the spot as soon as possible, yet, from the blow on the head the man had received, he sank, to rise no more in this world. I have merely mentioned this case, related above, to shew the necessity of having the topsail buntlines well taut, so as to lift and tauten the foot of the sail as much as possible, while men are employed on the lower yards in such weather as I have just stated.

Sister blocks.

With these blocks as at present fitted in the navy, the topsail-lifts and reef-tackles, excepting the yards are square, never lead fair; under all other circumstances they are continually chafing across the shell of the block, and from the

constant bousing up of the weather topsail-lifts, this rope becomes magged, and the yarns frequently burst under the service from the strain, and shortness of the nip. This proves that too much attention cannot be given to the condition of the topsail-lifts; they should be frequently overhauled, and the nip changed occasionally, as the men on the yards are dependent on their security. By this mode of having the sister blocks, you wear out the shrouds to which they are attached much sooner, from the continual jerking of the topsail lifts. This plan admits of much improvement. If it could be managed, it would be a great saving of rope, besides the continued splicing and repairing of these ropes. I have given this subject much consideration, and think it might be materially improved.

Bobstays carried away.

Bobstays are generally carried away when sailing by the wind, and mostly in rough weather; therefore, the instant it is known, the ship should be put before the wind; and should the bobstays be gone in the way of the cutwater, it will be very difficult to reeve new bobstays. The best way I have heard of, is to take a well-stretched messenger, or a few lengths of the stream chain cable, with which make a clove hitch round the bowsprit, as much outside the bobstay collars as possible; then take the two ends through the inner hawse-holes, one on each side, heave them both well taut together, then secure them to the bitts, or ring-bolts. When done, bring the ship to the wind until you can reeve your proper bobstays. If you use rope, of course you must have plenty of service in the way of the hawse-holes.

Brailing up sails.

In taking in a sail which brails up, if in a breeze, always man the lee-brails best; but if light winds, or calms, man both equally, and run them up together.

Cap bobstays.

I have frequently heard it asserted (and by very good seamen) that an outer, or cap bobstay, is of little or no use; but I must say, from what I have observed, that I cannot help considering the cap bobstay very useful. No doubt the principal support of the bobstays should be exactly in the way of the fore-stays; still you have other strains to counteract, such as the fore-topmast-stays, and the working of the jib-boom in the cap. Whenever the ship is pitching or sending, the bowsprit is always working, sustaining the foremast in the latter, and its weight and jib-boom during the former: now anything that can tend to lessen this working, I contend is desirable, and such I conceive the operation of a cap bobstay calculated to perform. Bowsprits are not unfrequently sprung outside the bobstays, which would lead me to suppose it likely to arise from a long outside lever in continued motion.

On veering a buoy to pick up a boat.

When a boat is required to be veered astern, it generally arises from a boat not being able to pull up against a lee-tide, or from the wind and sea being too heavy to allow the boat to pull up in the ship's wake; but nine times out of ten, this circumstance takes place when the ship is at anchor, in a strong tide way. If you wish the rope to reach the boat quickly, you had better attach a second, or perhaps a third buoy to the rope, as with one buoy only, the rope makes so great a curve in deep water, that one buoy cannot have much effect, and in shallow water, it cannot drag the bight of the rope through the mud, or over the ground; therefore, as the object must be to get the rope to the boat as quickly as possible, as she is fast dropping astern, it will be advisable to make the line as straight as you can, with two or more buoys; these additional buoys will not only help greatly to keep the rope

off the ground, but carry the rope in proportion to their size and number.

When the weather will admit, this service may always be much quicker accomplished by sending a rope, by a boat from the ship, to the wind or tide bound boat; the larger boats should take the other in tow while hauling up. How often have I seen a buoy attempted to be veered astern to pick up a boat that could not reach the ship, either from tide or bad weather; but from one buoy not having the power to drag the bight of the rope along the ground, there it remained, about 50 or 60 fathoms from the ship's stern, perfectly at an anchor. When cables or hawsers, with or without anchors, are sent from the ship with the intention of letting go an anchor, or making it fast, I am strongly of opinion, that it would be much better, if one or more boats were more frequently used in keeping up the bight of the cable or hawser with slip ropes, to enable them to pull while buoying up the cable or hawser. The first boat should only be a moderate distance from the launch, or boat, which the cable is to pay and go from; this will give the launch a good point to start from, as the bight of the cable will be well up in the water; consequently, if well towed from that point, while paying out the cable, you will stand a better chance of getting a larger scope of cable, than if all the boats were ahead towing the launch. The best seamen in a head sea, or against a strong wind or tide, always consider it best first to lay out a small anchor and hawser, as a guess-warp, in the direction you wish to lay out your large anchor; with this hawser, you haul out your launch instead of towing her; still it will be advisable to let the boats support the cable as before. When you can make your small hawser fast to a vessel, or to the shore in the right direction, it will be best for taking an anchor out.

Hoisting out boats.

In hoisting boats in or out that are difficult to keep clear of the fore-topmast back-stays, it will be advisable, besides the usual purchases, and the inside and outside after guys, to have a tackle from the mainmast-head, or lower pendents: on the opposite side to which you hoist your boat out on, hook the tackle as far forward as possible; when high enough by the stays, let this tackle be well taut before hauling out the yards, and it will be of the greatest assistance in keeping the boat clear of the back-stays; this tackle should be unhooked previous to lowering the boat, and in hoisting in a boat, it should be hooked when the boat is high enough by the yards, and manned ready to hoist with the stays.

Many top-gallant-masts have been carried away from the want of the precaution of guying in the top-gallant and royal back-stays. In hoisting out even smaller boats, the want of the above precaution, and letting the boat swing from the stays to the yards, have expended many a fore-top-gallant mast.

On boats being sent to tow vessels, &c., when on fire.

When boats are sent on this service, it will be well to provide them with a few lengths of small chain to make fast to the burning vessel; fire-grapnels would do well to throw on board, and then make fast the tow-rope to the chain of the grapnel, for the boats to tow from. There are many instances of tow-ropes and hawsers being burnt when employed on this service, and other vessels much endangered from want of this precaution. If hawsers are sent to be made fast to a burning vessel, with the intention of warping her clear of other vessels, a length of stream chain cable will be found much safer than trusting to rope alone; for though the fire may be some distance from the hawser or rope when you make it fast, yet fire

spreads so rapidly, when the material of a ship is taken into consideration, that it never can be safe to trust to rope alone.

Boats going alongside a ship at anchor in bad weather.

If the boat is under sail, and the ship to windward, it is generally considered best to make a tack to windward of the ship, then unstep the masts and pull alongside; but if you are coming up in any direction abaft the ship's beam, unstep the fore and mainmast when you think the mizen will carry the boat alongside; and the moment you are sure of the boat-rope, down with the mizenmast. Many boats have been much endangered by the chains, quarter boats, &c., for the want of attention to this. In bad weather, when boats are going to and from the ship, it is considered advisable not to toss up the oars, as many serious accidents have taken place from this circumstance.

On hoisting boats in or out with lower yards and top-masts struck.

This sometimes will happen when lower yards and top-masts are struck in blowing weather; and generally takes place to assist some vessel in distress, &c. Besides the usual purchases, the lower yards should be cross-lashed to the masts, and well topped up, the fore yards should have a good strong tackle as a preventer-brace to the bowsprit. I particularly mention a tackle, because it comes up so little in proportion to a long pendant with a tackle hooked to it. In hoisting out a launch with your lower yards so low, you cannot with safety to the fore yard, lose any of the preventer fore brace, therefore it will be well to bear in mind, that with a three-fold purchase, that is, one block being hooked to the fore yard-arm, and the other to the bowsprit, if you lose six

inches of the faul, you will only lose one inch of the preventer brace; and if you have two double blocks, you will lose one inch in four, and so on in proportion.

It is of the greatest consequence that the main-yard should also have a considerable additional fore and aft support, for when the launch is high enough by the up and down tackles, and you are walking her out by the yard purchases, from that moment until the boat is in the water, you must have a greater fore and aft strain on the lower yards when struck, than if in their proper places. I saw a frigate at Simon's Bay, Cape of Good Hope, carry away her fore yard in hoisting out her barge with lower yards and topmasts struck; the accident occurred from having no preventer-brace from the fore yard to the bowsprit, for the want of which, the fore yard was sprung when the weight from the boat came between the yards. Most seamen are of opinion, when the lower yards are up, that both boom-boats should never be hoisted in or out together, without preventer-braces to the bowsprit, and that the launch should always be hoisted in or out with preventer-braces on each of the lower yards, more particucularly in large ships.

Towing boats.

To tow boats well in any vessel above the height of a flush deck, the tow-rope should be from forward. This precaution when towing boats beyond their own speed, will be found to add much to their safety, as it will in a great measure prevent that continual lifting of the head of the boat out of the water, and consequent dangerous depression of the stern. We have frequently seen boats towed from high stern ships, to the imminent danger of both men and boats. If you tow your boat from forward, and the ship is by the wind, you can keep her well under shelter of the lee quarter, and still have a scope of tow-rope nearly the length of the ship. Boats towed

from forward are always much quicker got ready for service. Great care should be taken that the tow-rope is not made fast to the bow-ring, but to the foremost slings, in the bottom of a large boat, but if a small boat, or one without slings, pass the tow-rope through the bow-ring, then make it fast with a turn round the after thwart, that the boat-keeper may be ready to slip it, if required. Excepting in very light winds, each boat should have a separate tow-rope, as boats are sometimes much strained from having a long string of boats astern of each other.

On such occasions as boats going on service, &c., it will be found advisable to have a good strong hawser on each side, then veer a boat astern by each hawser, until you have sufficient room for all the boats, then let each boat take up her own distance, and make fast to the hawser, ready for towing.

In getting boats out when all the masts are gone.

There are many instances of ships losing their masts by storm or action, when the boats and spars on the booms are not materially damaged; under these circumstances it may frequently be of the greatest consequence to get the boom-boats out, to enable you to save the ship or crew. With your boom-spars rig fore and main sheers, minding not to have them too distant from each other; besides the usual guys, heel-lashings, &c., the sheers should be well spanned together above, and at both heels. The up and down purchases may be put on before or after the raising of the sheers. When the boat is high enough by the up and down tackles, bear her over to the side you wish to put her in the water from, having previously placed small spars across the deck, with the ends well over the side to prize her clear, and take against the side; while lowering, the inner ends of each spar should have a rope

made fast to it. If you think you are likely to have much difficulty in getting the boat over the side, heel the ship well previously to weighing the boats, and it will be of the greatest assistance. If you are obliged to heel the ship, or the boat a heavy one, it will be desirable to have good up and down tackles on the opposite legs of the sheers. I pre-suppose the decks shored up, if the boat is a heavy one. Merchant ships frequently hoist out their long-boats without any yard purchase; but from the great breadth of beam of ships of war, and the weight of their launches, &c., this cannot be done without some difficulty.

Chain slings for boats.

Chain slings for boats are most desirable, as you are then relieved of much of the anxiety which you must feel about rope slings, from their continual exposure to the weather and lying in salt water. In using chain slings, the benefit is beyond expression; still it requires great care when you give them to small boats, that they are not too heavy for them, as we have seen some instances when quarter or stern boats have been nearly carried down by their chain slings, so much so, that the boats were perfectly useless, or worse than useless, to the boats' crews, as they only tended to deceive the men with false hopes, for the moment the men touched the boat she sunk from under them; one of the same boats when fitted with rope slings and filled with water, was considerably more buoyant, consequently would be much more useful in helping to save her crew. I merely make this remark to draw the attention, that care may be taken not to give boats chain slings large enough to endanger the lives of boats' crews.

Bathing.

The practice of bathing after the men have had their supper, seems liable to objections, as the men after having had

their evening's grog are more excited, therefore more likely to do foolish things, such as jumping from great heights, swimming beyond their strength, inattention to orders, &c., but when this becomes coupled with a close harbour, and plenty of shipping, the difficulty of attending to the men swimming becomes ten-fold; and now and then under such circumstances, a few who have been cooks of their messes, or in some other way taken a little too much, will be tempted to strike out for the shore, with the hope of getting a glass of grog; so surely does the excitement of a little too much, lead to that of getting more. Those who advocate evening bathing have only to try morning bathing with the same crew, and notice the difference. The crew that will do all sorts of foolish things after grog-time, in the morning will keep within bounds in swimming, and be orderly and attentive in every way. I have always found, that by morning bathing you decrease the number of complaints made against the men on these occasions, such as not coming in when piped in, not attentive to the orders of the midshipmen in the boats, &c. What I have stated relates merely to discipline, but I believe medical men in general think the morning the best time for bathing, as it is the most conducive to health.

When making passages in tropical climates, or when you do not wish to heave the ship to, or from other causes, it has often occurred to me that we do not generally give the ship's company an opportunity of bathing themselves as much as would be beneficial to their health and cleanliness. I never could see under such circumstances, why the ship's company should not bathe in their morning watches by turns, on the main deck, after the upper deck has been washed, or before, according to circumstances; this, at least, would give the crew a better chance of cleanliness.

Pointing block strops.

Pointing block strops ought to be discontinued as much as possible, as from the time and trouble these strops generally take in pointing, they are frequently worn too long, because the pointing must be destroyed before the strop can be replaced. The wove mat is far better for this purpose, as it can be taken off whenever you wish to look at the strops, and put on again. No pointing can be as neat and regular as a wove mat.

Sea boats' crews.

As it is not generally considered requisite to have many good seamen in harbour boats' crews, it therefore becomes of more consequence that there should be a good sea boat's crew in each watch, and that these crews should not only be composed of good boatmen, but good sailors and good swimmers; each sea boat's crew should have several men attached to her above her proper crew, in case any one should be employed aloft, &c.

When called away in cases of emergency (but not above the proper number to go in a boat), such as a man overboard, &c., you are often obliged to lower a boat at sea, when it requires stout hearts and ready hands to manage her. The practice of covering stern and quarter-boats at sea much decreases the chance of saving any poor fellow who may fall overboard. While on this subject, it would be much better if more attention were paid to have tow-ropes always made fast to the foremost slings of the quarter-boats when at sea. The boat-rope should be made fast forward on board of the ship, so as to put her in the best position when lowered for unhooking her tackles; for the want of this precaution, if the bowman unhooks his tackle first, the boat swings right round, and often swamps, more particularly in places where you have not suffi-

cient room to bring the ship to the wind on either tack. I have twice seen boats swamped for the want of a tow-rope; once, in running into a close harbour, a man fell overboard; the ship could not be brought-to on either tack, a quarter boat was therefore lowered in great haste, without a tow-rope; the bowman unhooked his tackle first, and the boat swung round immediately, and before the after tackle could be unrove or cut, she was swamped. The other quarter-boat was lowered, and she nearly shared the same fate, from the want of a tow-rope. In the confusion, the poor man was drowned, as both boats were rendered useless in helping to pick him up; in fact, had not the ships in the harbour sent the boats to pick our men up, we should have lost several in the first swamped boat.

A strong box, or place of security to keep the ship's company's money in.

As the prevention of crime, and not the punishment of it, must be the intention of all good discipline, perhaps it might be considered worth attention to try whether a strong box, or a place of security for keeping the ship's company's present use money in could not be effected. At present, as all the crew, very properly, have nothing but bags to keep their clothes, &c., the insecurity of the men's bags, for the purpose of keeping their money in, holds out too great a temptation, for a few ill-disposed people, to rob their shipmates. Taking the men on board of ship as a body, you will not find in any society of the same class and size, fewer thieves than are met with on board of ships of war generally; still it is most astonishing the number of thefts that one person may commit, and the length of time he may escape detection from the noiseless way in which the men's bags can be plundered; even in ships, where thefts are of frequent occurrence (which

generally take place in a newly commissioned ship), when found out, the gang generally consists of very few. I am much inclined to think, that seamen often spend their money foolishly, because they have no place of safety to keep it in; and think that a strong box, or some place of security for the men's money, would make them more careful of it, and in a great measure stop theft. From the insecurity of keeping their money, the men are often heard to say, if they do not spend it, somebody else will for them, therefore, they had better do so themselves.

Top-gallant buntlines.

I have very seldom seen top-gallant buntlines made use of in the navy; still, I feel quite certain, if they were used more generally in large ships, on bad-weather stations, that they would greatly assist the men in furling the sails, and help to save many a sail from falling into the hands of the sailmaker, besides the numberless cracks the men on the lee-yard-arm get with the foot of the sail. You commonly see the smallest ship-rigged vessel with mizen top-sail buntlines, reef tackles, &c. &c., when the sail is considerably smaller than the fore or main-top gallant sail of a ship of the line.

Boats with treasure.

Boats employed in taking treasure to or from ships, ought always to have a buoy-rope attached to the treasure, so that, if in the event of any accident happening to the boat, the treasure may still be saved. Ships having to hoist in or out treasure, should have a net for that purpose, made of inch, or inch and a half new rope, well stretched; the net ought to be sufficiently large to contain four or five thousand dollars at a hoist. The mashes of the net should not be too large, and the rope to reeve through the upper mashes to hoist the net in and out by, should be about two and a half, or three inch

rope, made into a grummet, but not grummet fashion, as you are not quite so sure of the strands lying equal in that way of making a grummet; the grummet should be rather larger than the spread of the net, and made with a neat long splice, the ends being tapered off to nothing. When used, the two opposite bights of the grummet should be put over the hook, and the hook well moused, before hoisting in or out. We have seen canvass made to fit inside treasure nets, to put in or take out at pleasure. There can be no doubt as to this being a very good plan, because, if any treasure should by accident get loose in the net, it would be perfectly safe.

Boatswain's store-room.

When the boatswain's store-room will admit of it, the ropes most likely to be wanted, of the different sizes rove, should be kept on reels, holes being bored, and well smoothed, through the most convenient parts of the bulk-head of the store-room; through which, pass the different sized ropes, with everything quite clear for running off when required. At quarters, or night, this will prevent much loss of time. To ensure no use being made of these ropes, excepting when actually required for service, they should be kept pointed.

All the hawsers should be kept on reels, at hand, and clear for running off, having been previously becketted and pointed; great care being taken never to reel them up, until perfectly dry after use. While on this subject, it would be well if the rope stream-cable, runners and tackles, shroud hawsers, top tackle gear and luff tackles, were always kept perfectly ready.

Leading blocks.

During evolutions of great excitement, more particularly when working against other ships, if the leading blocks are not guarded with pieces of wood made for that purpose, with holes bored in them, through which the ropes are rove pre-

vious to reeving them in the leading blocks, or boys stationed with small sticks, to keep continually rapping the ropes a few feet from them, the men will frequently get their fingers jammed in these blocks. We have known several men who have had fingers and hands destroyed from the want of some precaution of this kind: more particularly, when ships are exercising masts, yards, or sails, against each other, the crews then are more regardless of their own safety, in their anxiety to be the first ship.

Exercising newly raised boys.

In exercising newly raised boys aloft, we have frequently known them to escape serious falls by having the awnings spread previous to their going aloft; by which means, should any of them fall in-board, they must fall on the awning; and although it may be very old, it will go far toward their escaping unhurt. In the *Powerful*, a boy fell from the mizen top-gallant yard on to the quarter-deck awning, and was perfectly unhurt. We have seen numberless instances of both men and boys being saved by the awnings. For instance, the boys are sometimes exercised up and down the main-stays, and if you have the main-deck awning spread for them, while so exercising, you will see them all go up and down in the most fearless manner; but, begin without the main-deck awning being spread, and not one-fourth of the boys will venture either up or down. Give them the habit of knowing the power of their hands and feet, with some hope of protection at first, in case of falling, and you will soon see them quite indifferent about whether the awning is spread or not. The main-deck awning should not be pulled out too taut on these occasions; the ridge rope, and every part of the awning should be sufficiently slack to give way a little, in order to break the fall the better. We have known boys, from a little management of this kind at first, become most fearless aloft, on very

trying occasions. Too much attention cannot be given, in order to make seamen of the boys, as the Navy will have to look to itself in future, for its best men.

Boys.

The first class boys, as a matter of course, are stationed in the tops, &c., and have their regular exercises with their different parts of the ship, besides their progressive exercises, which should be taught to all beginners. The second class boys, though mostly servants, ought still to have a fair chance of becoming seamen as much as possible, for the good of the service, as well as the boys themselves. The practice of obliging all the second class boys, and those of the first class who are backward, to go up one side of the rigging, and down on the other, every morning, beginning with the lower rigging, and crossing over the topmast cross-trees, as they improve, but of course limiting the distance to go up according to the spirit and capabilities of the boys, which often vary considerably, is highly beneficial; and if this practice is well carried out, the boys become daily more fit for smart royal and top-gallant yard boys. The daily habit of going over the mast-head for exercise enables the boys, after a few months, to gain breath for running from the deck right up to the royal or top-gallant yards; in fact, many of the smartest men we have in ships of war, can date their first smartness to the practice of sending the boys aloft every morning.

In ships, where the practice of sending the boys aloft daily is persevered in, their improvement will be rapid. The boy who shivers and shakes, while only going up two or three ratlines at first, will, in a short time, think nothing of going up one side of the rigging, and down on the other.

The Navy must look to seamen of her own bringing up for smartness, as merchant seamen are proverbially slow aloft.

The time often taken for exercising the boys aloft, namely seven bells in the morning watch, does not appear to be the most appropriate time, as, at that time, they are generally most wanted by their masters. If the boys are sent aloft between five and six bells, and before they clean themselves for muster, it will add much to the fixing their attention to what they are doing, instead of having their attention divided between going aloft, and keeping their better clothes clear of the tarry rigging and ropes. Whoever does all in his power to forward the boys of the Navy in seamanship, and for the general use of Her Majesty's Navy, does a lasting benefit to our truly noble Service. In these days, when our coasting trade is cut up in every direction by rail-roads, naval officers cannot be too particular in their attention to the education of the boys brought up in the Navy.

Boatswain, and his mates.

The quick or slow pipe, with the quick or slow voice, and the long call of the boatswain, or his mates, when the hands or watch are required for any duty, will strike upon the ears of the ship's company with the spirit or dulness with which it is given, and the movement of the men up the hatchways will be in proportion. The same thing may often be observed when two officers of equal abilities are carrying on the duty of a ship. One officer, from giving his orders with spirit and clearness, will inspire the ship's company with zeal and activity; while the other officer, from his slowness, and want of spirit in giving his orders, will occasion the duty to be done slovenly and privateer-like.

Shifting, or taking out, a bowsprit.

In preparing to take a bowsprit out, the topmast had better be struck; the fore or main-topmast got up and down;

the fore part of the foremast for a derrick, previous to bousing the fore-runners well taut, and securing the foremast. Rig, droop, and secure the derrick, having first shored the deck up on each side of the bowsprit. We believe the fore-yard is seldom, if ever, now used for taking out a bowsprit when other spars can be procured. We were induced to mention the subject of striking topmasts before taking out a bowsprit, from having seen a vessel do so, with her top-gallant masts only struck; her fore-topmast stays being secured to the bumpkin ends. Towards the afternoon a breeze came on; Sir Henry Blackwood was the Port-Admiral; the moment he saw it, he was much displeased, and ordered the fore-topmast to be struck immediately. All the support that you can possibly give to a foremast, with the bowsprit out, is really so much up and down, that it would be desirable to strike both topmasts for fear of a breeze, as the main-topmast, if left up, must bring an increased strain on the foremast head. But should the fore-topmast not have been struck previous to the preparation being made for getting the bowsprit out, great care should be taken that none of the derrick gear, runners, &c., are made fast so as to impede the striking of the fore-topmast; however, unless you have a bowsprit alongside ready to take in the moment the other is out, it will always be best to prepare the ship in a seamanlike manner, by striking the topmasts at once.

Quarter and stern boats at sea.

The practice of hanging clothes about the quarter and stern boats, is one that ought to be discontinued as much as possible. Men's lives have often been sacrificed, or much endangered, for the want of this precaution; still the space between the quarter davits appears generally to be the favorite place for the captain's coxswain to hang anything the captain may have wet, and sometimes the clothes of other officers. Though

clothes are hung to the spans, it will not prevent the sleeve of a shirt or the leg of a pair of trousers getting between the boat's fauls while lowering a boat. If two white lines, one for the captain and one for the officers, about the size of the white lead-lines, were kept for the purpose of hanging up the captain's and officers' clothes when wet, between the main and mizen rigging, it would afford a regular place for these officers to have their clothes dried when required.

The order of a ship known by her boats.

The order of a ship can generally be pretty accurately known by the appearance of a man-of-war's boats, and her boats' crews. Whatever service a ship's boats may be employed on, if once in good order, you cannot mistake the order of the ship to which such boats belong. If the ship is in good order, her boats will partake of the neatness and cleanliness of the ship, and her boats' crews of the good conduct and cleanliness of the ship's company; but if a ship is in bad order, her boats will partake of the slovenly habits of the ship, and her boats' crews will generally be wanting in neatness and good conduct. When a boat from a ship in good order is sent to another ship, the crew are well conducted and attentive to duty. But not so the boat's crew of the ship in bad order; for the boat is no sooner alongside, than her crew stand upon the thwarts and endeavour to speak to the ship's company through the ports, and often get noisy alongside, and in consequence are ordered to lie off. As a general rule it is much better not to allow any boats to lay alongside, excepting while waiting for an officer, or clearing of provisions, &c. Nothing can look more disreputable than well-dressed seamen on shore without shoes. This frequently happens with boats' crews, who have things to carry in different directions on landing. In such cases, you hear the coxswain of a boat inquiring if any of the men have shoes,

and directing those who have, to carry the things to their destination; but we have often seen whole boats' crews on shore without a shoe amongst them.

To get boom-boats out with one or both lower yards carried away.

We will suppose the fore-yard carried away from some accident, and you wish to hoist your boom-boats out, I think the following method would answer well. With a good strong spar, make a derrick on the side you wish to hoist your boats out on; I should think your upper guys had better go round the cap, and secured on deck on the opposite side. If you find your derrick will be best abaft, you will have to slack a shroud or two of the topmast rigging to let the upper guys lie fair; have a large strong shoe for the heel of the spar, which should be well lashed, and the shoe cleated, and decks shored up. A runner purchase should be lashed from the head of the derrick to the bowsprit end (besides the purchase for hoisting the boats out by) for bracing the derrick forward as required; the derrick might perhaps require a martingale to keep it down while hauling the boats out by the yard and derrick purchases. I am inclined to think, in most ships, you would be obliged to slack one or two of your after lower foreshrouds on the side on which you hoist your boats out, but this will not be of the slightest consequence, because, in hoisting boats out or in, without the yard, you do not bring any increased strain on the rigging on the side on which you are so employed. I have never hoisted boats out or in in this manner, but the more I have thought on the subject, the more I have been impressed with the idea that it would answer very well. Boats might be hoisted in or out with one or two derricks with equal ease.

Monkey blocks.

These blocks are generally secured on the upper part of the topsail-yards, one on each side, from eighteen inches to two feet from the tye blocks. The buntlines, instead of being rove through blocks at the masthead, are rove through the monkey blocks from forward to aft, and thence on deck; so that in hauling the topsail buntlines up, you pull the yard down at the same time. In blowing weather, this plan has many advantages over the buntlines at the masthead. In the first place, it gives you more security for getting the topsail yards down, when the buntlines are hauled up. Secondly, from a second to a close-reefed sail they are in a better position for furling the sails. Thirdly, in most cases for which buntlines are used at sea, they are in a better position for confining the foot of the sails to the topsail-yards, thereby preventing the sail from flying away to leeward, as much as if the buntlines were at the mastheads. We have seen this plan tried at sea, and answer well; the topsail buntlines being removed to the masthead previous to going into port. The above plan of having the topsail buntlines does not answer so well for harbour furling; but at sea, when you once get beyond a double-reefed topsail breeze, the monkey blocks are most desirable, as they help to bring the yards down, confine the sails better for furling, and keep the sails from blowing over to leeward.

Backing or shivering the mizen-topsail by the wind.

This method of lessening the ship's way is now generally disapproved of, as in so doing, the ship feels the want of her after sail, and consequently falls to leeward; if the main-topsail were shivered or backed for the same purpose for which the mizen-topsail is so often used, the desired object would be more readily obtained, and the ship preserve her station,

which, in a fleet, is of the highest importance. The occasions which call for this practice are, picking up boats, keeping your station, or allowing another vessel to pass you; all which objects are more speedily, and better attained, by backing the main-topsail than the mizen. But, if the mainsail is set, the mizen-topsail may be made effective, by bracing it flat aback, which will not only retard the ship's way, but prevent her tendency to fall away from her course; but when squared, or shivered, the ship will be liable to fall off, and thereby increase her way, and fall to leeward for the want of after sail to keep her to the wind; but with the mizen-topsail braced, in opposition to the other sails, the ship's stern is kept from flying to windward, and thereby her way is decreased, and her falling off is in a great measure prevented.

On steeving the bowsprit.

As most ships under all plain sail, with a side wind, carry more or less weather helm, should this take place to a great degree in a ship with a steeving bowsprit, it has been found to decrease this tendency, by reducing the angle of the bowsprit, which makes all the head-sails act more in a line with the keel, and with rather an increased lever; consequently in a better position to counteract the tendency to weather helm.

1st.—As every deviation from the middle position of the rudder must in some measure retard the ship, therefore it will be found desirable not to let the ship carry more than a spoke or two of weather helm, if possible. 2ndly.—Now it has been found that this tendency to weather helm is much diminished by giving less steeve to the bowsprit, from the increased power of the head-sails; it is therefore desirable that bowsprits should have as little steeve as is consistent with its not being pitched under water; for the less the steeve, the greater will be the angle of the bobstays.

Stoppers abaft the bitts.

Ships of war frequently have their cables triced up over head from the after part of the bitts to the main-hatchway, that is when they expect to lay long at their anchors; in such cases, there is great danger to the bitts in strong winds. I was in a frigate in Simon's Bay, Cape of Good Hope, laying at line-of-battle ship's moorings, in a heavy gale from the north-west, with yards and topmasts struck, and from the moorings being expended round the bitts, instead of being stoppered to the deck-bolts abaft, the bitts were twisted out of the deck by the same process you twist the crown out of a pine-apple, and the ship was providentially saved by bringing up with the bower, veered to the clinch. Let it be always borne in mind that the bitts are only veering-cleats upon a large scale, and that it is always unsafe to ride by them. When the cable is well stoppered abaft the bitts, they are free from any strain.

Battle; necessary arrangements to be attended to in exercising a crew and preparing a ship for.

1st.—Inspect the fitness of the guns for service, and the angles to which they can be elevated or depressed with their quoins or screws. 2ndly.—Distribute the men at quarters with reference to the watch-bill and ratings, quartering a sufficient number (armed) in the tops and rigging, and let them be properly instructed in their several duties in clearing ship for action. 3rdly.—Dispose of the gear for the guns when not at quarters, in the most simple and convenient manner, that it may be got to the guns without delay, or confusion in the dark. The following articles are most particularly to be kept in constant readiness and good order. Locks fitted with trigger-lines and turn-screws, also spare locks in case of acci-

dent, tube-boxes and tubes, priming-irons and vent-bitts, rammers, worms, and sponges, boarders' arms to be fitted with proper beckets, &c., &c., fire buckets with lanyards, lanterns, matches and swabs, match tubs; spare breechings and seizings, relieving-tackles, spare flints ready leaded, for shifting; a sufficient number of round shot to be kept on deck for each gun; the spare shot below to be kept at hand; grape and case-shot to be kept on deck in a dry place; a sufficient number of wads to be always kept at the guns, and the spare wads to be ready for handing on deck. On beating to quarters, the gear is to be taken to the guns; quarters well cleared, train-tackles hooked. The screens for the magazine to be continually rolled up in their places, ready to be let down in a moment. 4thly.—The route of the full powder-boxes from the magazine, and the mode of returning the empty boxes, should be clearly understood by the magazine-men and the powder-boys. 5thly.—Due precaution to be taken that there should be no unnecessary accumulation of powder on deck, and that the full powder-boxes should be secured from accident. 6thly.—The keys for opening the heads of the powder-cases, to be kept always in the magazine, in the same place. 7thly.—The spare tubes, spare rockets, false fires and match, to be kept in the magazine. The light-room to be kept clear, the lamps clean, and in good order. Shot-plugs to be distributed, and kept ready in the wings. In exercising the guns, let it be done in silence, and without confusion. Exercise with powder and shot as frequently as the Service will admit, that the regularity of the supply of powder from the magazine may be ascertained, and corrected, if faulty. The men to be occasionally practised in the following exercises. Shift a truck or more; shift a breeching; man and exercise both sides; hand up rope, to reeve of the size called for; house and secure the guns for sea. Rig and man the winches. Call the boarders. The marines to be particularly drilled so as to

act with the best effect in covering the boarders, or repelling the enemy. Exercise the fire-men; exercise the sail-trimmers in the various manœuvres of making and shortening sail, &c.

NOTE.—The men stationed on the quarter-deck and forecastle should all be sail-trimmers, instead of calling men from the lower batteries. If it is only to back or fill a sail, call a few men by their numbers. Carpenters to have their tools ready to cut out shot, or stop shot-holes, cut away wrecks, &c. The ladders from the several decks to be fitted in the most convenient manner to admit the boarders to come up from below. Arrangements for conveying the wounded to the cock-pits. Shift a gun or guns, from one side to the other and likewise fill the chase ports from the ports adjacent. The spare tiller to be put in its place. Relieving-tackles and rudder-tackles to be hooked. Rudder chocks, spare wheel and wheel-ropes ready, and practised reeving, &c. Explain to the men the use of the sights, the names of the different parts of the gun and carriage, and particularly what is the difference between line of metal and line of fire, or bow of the gun. Interrogate the men individually, touching their knowledge of Practical Gunnery, and discover the most intelligent for instructing others. Collect the captains and the second captains, and drill them well, and also at firing at a mark, which will go a long way towards improving the rest of the crew. In arming the boats for service, a proper number of men, exclusive of the boats' crews, to be appointed to each boat, as well as officers; their arms to be kept in order and in readiness. Ammunition boxes, prepared baracoes for water filled, or in readiness; and the Purser instructed to have provisions always at hand for victualling the boats' crews at a moment's warning. A certain number of the crew to be trained to small arms, and commanded by particular officers. Arms to be

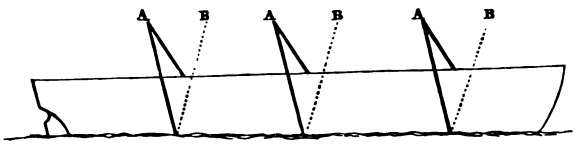
kept clean by the men who are trained to them. The cables, hawsers, &c., should be kept clear, and in readiness to hand up either to tow, or for securing a mast. The cables and hawsers to be pointed and becketed. Runners and tackles to be ready; stoppers for lower and topmast rigging to be fitted and kept at hand. Stoppers for topsail-sheets, slings for topsail yards and gaff, &c., to be fitted; preventer-braces to be rove, and stays and back-stays snaked, and a toggle on the standing part of each of the regular braces. A sufficient quantity of water to be kept on all the decks as *Fighting Water*. Luff-tackles always to be kept ready fitted. Carpenters' axes and junk-axes to be sharp and ready. Fire-engine to be in order, and arrangements made to extinguish fire, when not at quarters. Arrangements made to repel boarders, if surprised at anchor. Spare anchors, stocks, and fishes, to be conveniently got at. A device by which one general level can be given to the guns by order, either for horizontal fire, or otherwise, independent of the sights, when the ship heels, or at other times. A device by which the guns can be trained in parallel directions by order, or by which the fire can be concentrated. Officers as well as men to be instructed at the broad-sword exercise.*

Boats assisting to launch themselves.

Boats and small vessels have often been made to assist themselves, while launching, more particularly on an open coast, as in such places, you frequently have a long swell, or rollers running up the beach. By the method I wish to point out, these rollers are taken advantage of, to assist during such operations. It is done as follows:—when the vessel is per-

* I am indebted for these memoranda, on clearing a ship for action, to Captain William Robertson, my former commander, who having served many years as 1st Lieutenant, had drawn them up for his own guidance, previous to the establishment of the *Excellent*.

fectly upright, place an equal number of spars on each side of her, having the largest ends on the beach, and the upper ends slanting aft; in this position, get a good up and down strain from the upper ends of the spars to the vessel, and lash them well, so as to receive the up and down strain of the vessel only, without checking the fore and aft movement of the spars; in this way, as the rollers pass under the vessel, the spars bear much of her weight, and if strain be put on her cable, or other force applied at the time she is water borne, the heads of the spars will be moved from *A* to *B*, and the boat consequently launched the length of the curve performed by the heads of



the spars, and so on, stepping out the heels to their former relative position, until the boat is afloat. When short-handed, and a boat is placed in a similar situation, this method will be found a desirable one.

Boats sent to cut out at night.

During the late war, some of our best officers, when boats were sent on such service at night, always gave each man a distinguishing mark; for instance, say a blue frock with the right sleeve white, so that, the moment two white sleeves came in contact, they immediately knew they were of the same party. Since chain cables are in such general use, it would be desirable, that vessels of war should have the means of cutting or bursting the links of a cable, as chain-cable shackles in merchant vessels are seldom much attended to. The boat's painter should be secured to the boat-hook, and stopped along the staff, a small grapnel might be used with much effect on

such occasions. It appears from Naval History, that in night attacks, if our boats had oftener towed each other by divisions, each division having its proper work assigned it, and the divisions of boats keeping close to each other until the attack, we should have saved ourselves the mortification, on some occasions, of being beaten in detail, besides the heart burnings of the officers and men who were in the boats, unable to get up in time to assist their shipmates in such attacks.

To take out a waist or bower-anchor between two boats.

The sterns of the two boats should be as nearly square with each other as possible, a good strong spar (with its flat side down, and rounded on the upper part), should be laid across both boats, before their centre; having previously removed the rowlocks, and that part of the upper streak which may be in the way of the spar resting on the strongest part of the boat's gunwales; the spar should then be well lashed to the nearest standing thwart, and fore and aft rings, leaving sufficient room between the boats to admit of the flukes of the anchor going well between them, and the spar so lashed, that neither boat could close, or separate. The anchor should be lowered between the boats with the flukes perpendicular, and the stock horizontal, thus dipping the flukes between the boats, and securing the upper arm under the spar, each boat at the same time keeping her side of the anchor-stock square at her stern. The standing parts of the parbuckles or slip-ropes being made fast to the bottom rings, and the running parts rove through separate ones, if possible, and secured with several round turns round the after standing thwarts. The anchor should be slung, so as to manage it with ease, and some of the best seamen are of opinion, that a waist-anchor would be best to use for that purpose, should there be much wash of the sea under the bows: the same seamen are also in favor of low-

ering the waist-anchor with a davit from the fore channels, and steadying it from the ship with the fore-yard purchase, cross, and fore and aft guys, &c. In this way, an anchor may be carried out with the greatest ease, a kedge having been previously laid out, to haul the anchor and cable out by; haul out, until the weight of the bight of the cable is as much as the kedge will hold; then hang the cable with a slip-rope from the midship rowlocks of another boat, and haul out again; then another boat, with a slip-rope on the cable, so as to support the cable in the bights, till you have scope enough, being careful to let go together, upon a given signal from the boats that convey the anchor. The slip-ropes in the midship rowlocks on each side of the boat, will allow the cable to hang under the keel, and *both* ends had better be let go, to prevent accidents.

In laying out an anchor generally, the greatest difficulty is to overcome the weight of the bight of the cable, more particularly if chain. Some seamen, when laying out a chain-cable, prefer taking out the anchor with as much chain as is required for the depth of water, letting it go, and hauling out the cable to the boat, and shackling afterwards. This method is liable to damage the boat, and dangerous to the crew, if great care is not taken in preparing the cable well with good slip-ropes, and stops, before easing the anchor down; but even with the greatest care, the cable will sometimes run out with such violence, as to endanger the sinking of the boat, and the lives of the crew. In laying out anchors and cables, upon all occasions where the nature of the ground will admit, seamen are of opinion, that *hemp* cables should invariably be preferred to chain.

Hoisting up quarter-boats when a ship has much rolling motion.

When a ship has much rolling motion, it requires great care in hoisting up quarter-boats, or they are frequently stove

against the ship's side, guns, or mizen chains. To prevent this, one or more light spars should be put down from the mizen chains so as to act against the boat as a lever when she approaches the ship's side, minding to leave a sufficient quantity of the spar or spars well above the mizen chains, that the men attending to these levers may have good command over them. To decrease the fore-and-aft motion as much as possible, the life-lines ought to be crossed, and kept taut through the bow and stern-rings. In this way a boat may be hoisted up with the greatest safety while rolling.

When hoisting up a stern-boat with rolling motion, great care should be taken to steady the boat well with the life-lines crossed, and when pitching much, the same precautions ought to be taken to have spars over the stern, as before-mentioned for the quarter-boats; this will save your boat and cabin windows. When at anchor, I have seen a light tackle or single whip used for this purpose, from the driver-boom end.

Veering Cables in heavy squalls.

This evolution requires the greatest precaution, and should always be done previous to the approach of blowing weather, if possible; however, this cannot always be effected from the nature of the land; from mountains or ravines, sudden squalls arise, that give no sufficient warning. If you be caught under such circumstances at single anchor, and obliged to veer during the height of the squall, it would be advisable to let go the second bower anchor under foot, and veer them together, keeping hands by the sheet-anchor ready to let go, if required —but should the vessel have sufficient cable out to enable her to hold on during the height of the squall, it is always best to veer between the squalls than during their continuance. My experience has taught me, that however many anchors you may have down when veering in blowing weather, that it will always be desirable to have the remaining anchor or anchors, ready for letting go, if requisite. In the above statement I have pre-supposed the officer making all snug aloft by sending top-gallant yards and masts on deck, and bracing the yards to the wind, or striking lower yards and topmasts, if required. I may be told, ships of war should be moored in such situations as I have described; as a general rule I admit it; but I have known several ships to be placed in the situation I have mentioned. I was First Lieutenant of a vessel at the Cape, in which we were so situated, from having been ordered to prepare for sea immediately. We had hove into as small a scope of cable as would well hold the ship with safety, but while we were waiting for Commodore Schomberg's despatches, it came on to blow in sudden heavy squalls, and we were soon with two anchors ahead, and lower yards and topmasts struck, in less than three quarters of an hour from the commencement of the heavy squall. Many good seamen advocate the following method of veering when blowing very hard. If the cable you wish to veer from is on the starboard

side, brace your yards for casting to port, have the fore topmast staysail ready, in case it should be required, with the starboard sheet aft; have plenty of hands with several hook-ropes well manned, ready to run the cable up as fast as possible. The quarter-master should be desired to put the helm hard a-port, for the moment she starts, her first movement will be right astern; when she gets the wind a little on the starboard bow, veer as fast as possible. The moment the fore-topmast staysail will take aback hoist it; by the time you have thirty or forty fathoms of cable out, you will be drifting broadside to the wind, consequently very slowly. When you have given her as much cable as you think requisite, begin to snub her gradually, and you will find she will come head to wind easy to herself, and without sudden jerking upon the cable. The moment she is head to wind, down fore topmast staysail, have the head-yards in the position of their least resistance, and put the helm in midships.

On using hemp cables.

Most seamen admit that the chain cable has numerous advantages over the hempen one; but although this opinion generally prevails, still there are situations where the best seamen consider the rope cable possesses advantages over the chain.

"* The excess of weight in the chain over the hempen cables, renders it generally unadvisable to bring up with it in *deep* water. There is no general rule which has not its exceptions, so will the matter of our present notice have these, and they must be left to the judgment in each particular case. It most frequently happens when ships come to an anchor in *deep* water, it is in places with bold shores; and where even that anchorage is not obtained until but a short distance from the

* Capt. Griffiths on Chain Cables, p. 182.

land, and often in open roads or bays. In such situations, however good the chain cable may be to ride by, its inconveniences become very great when getting under-way, especially with the wind on shore, or where (as in most such cases it arises) that it is indispensable to get the anchor speedily up and stowed, that the ship may be under command. If in 50 fathoms water, with some swell and a good breeze, your anchor trips, say with 70 fathoms out, what a weight, what a heavy heave, what a dead nip in the hawse, what an additional time requisite to heave the anchor up, and all this time the ship completely unmanageable."

Every seaman must be impressed with the full force of Capt. Griffiths' remarks on coming-to with chain cables in deep water. Another difficulty attends ships so anchored, when the wind is fresh off the land, for should the ship drag her anchor off the bank, the whole cable out becomes up and down; and if weighing at the time, it must be a good messenger and nippers that will hold the sudden jerk of the anchor when falling into deep water; and if you take into consideration that the chain is generally about double the weight of the hempen cable, this will not surprise any one. At Madeira, in the *Hyperion*, we were anchored close in shore in about 25 fathoms water, and when in the act of weighing, a strong flaw of wind took the ship on the starboard bow, she shouldered the anchor, and cast to port (in shore). From the quantity of chain cable up and down (30 fathoms) the ship was unmanageable, and fast approaching the rocks; in this situation we were compelled to bring the ship up in 40 fathoms, or drift on the rocks. We lay in this dangerous position for nearly an hour, when taking instant advantage of the first favorable flaw, we slipped, and saved the ship by the sacrifice of 60 fathoms of cable, and the anchor. Had hempen cable been used, we could have walked the anchor up to the bows, the ship would have wore quickly, and the anchor and cable

would have been saved. The *Liverpool* was nearly lost at the same place, under similar circumstances. An admiral's ship in the West Indies, was a whole night drifting about with her chain-cable out to the clench, or nearly so, from having either dragged off, or missing the bank when letting go her anchor. Independent of the above statements, it appears advisable, that all ships should occasionally use their hempen cables, that the handling of rope cables may not be wholly forgotten. No one can deny the numberless good points of the chain-cable, still, there are so many situations which a ship may be placed in, where the rope cable is superior to the chain, from its being easier and lighter to lay out, such as when vessels get on shore, or in assisting others to get off, &c. So little are the seamen of the present day accustomed to the working of rope cables, that, even the proper terms used while coiling them, are often forgotten, or misapplied. It certainly appears worth a consideration, whether rope cables might not oftener be used with greater advantage to the Service than chain ones, when anchoring in open roadsteads with deep water and steep banks, and those banks often very close in shore. If there should be any chance of the ground being foul, attach a length of chain to the fore-ganger, by this means, you may keep your rope cable a fathom or two from the ground, while the weather remains moderate; and if you have taken the precaution to protect the rope cable in the way of the thimble, and a few fathoms upwards, should a breeze oblige you to veer, the chances are, that in deep water, very little of the rope cable would rub on the ground. When obliged to anchor in forty-five or fifty fathoms water, every fathom of chain out becomes of consequence, when heaving the anchor up, besides the heavy strain of such a weight of cable hanging to a vessel's bows. I believe there cannot be a second opinion, about a vessel's riding much easier in such a depth of water with the rope than with the chain cable.

On coaling screw steamers.

It has often occurred to me, that our screw steamers might be coaled much quicker, if they had one or more ports on each side for taking in coals; if this could be done without any risk to steam vessels, it would greatly facilitate their coaling.

Courses.

There are many occasions, in which it would be more advantageous to set the courses previous to setting the topsails, instead of so strictly adhering to setting the topsails first on all occasions; for instance, you are being towed by a steamer, and wish to make sail, so as not to detain her, or lose an inch of ground yourself; the wind is sufficiently on the bow to admit of the courses being set with the yards previously well braced up: if you set your courses previous to the topsails, you will diminish the strain on the tow-ropes, but, if you set your topsails first, they must be aback greater part of the time while setting, consequently, bring an increased strain on the towing hawsers. I mention the circumstance of vessels being towed by steamers, because, some accidents have happened, and vessels much endangered, from breaking their tow-ropes in narrow waters, while making sail by setting their topsails first; instead of which, if the fore and aft sails and courses had been set first, it would considerably have diminished the chance of such accidents. The lower yards being braced forward will make the topsails take much sooner, and set easier. There are many situations, in which you may have the wind sufficiently on the bow to enable you to set your fore and aft sails and courses, previously to setting your topsails, with the greatest advantage to the ship.

Taking in cables.

If the weather will permit of the lump lying under the bows, you will give the men a much better chance of running

the cables in, if you take them through the hawse-hole. The hawse-holes are so formed, that the cables are sure to run smoothly over them, and you give the men plenty of room for their strength; to this, add a little music, and the cables are soon walked in. If rope cables are taken in through the hawse-holes, it gives them a much better chance of being coiled away snugly. If you take your cables in with the lump alongside, you have not room for the men to work properly.

To ascertain how the ship's hawse is, by a common compass.

When the ship is moored, and lying with an open hawse, then note how the ship's head is, at the same time taking the bearings of both anchors carefully with the compass you intend to use; then, take a piece of white silk thread, sufficiently long to spread the diameter of the compass card, and the bight to reach the centre of the glass which covers the compass, minding to have the silk thread sufficiently slack to admit of the compass traversing freely, and also to enable you to put the compass glass on with care; when ready, attach one end of each of the silk threads to the exact bearings of the anchors, the starboard thread to the starboard anchor, and the port to the port anchor: the threads should be attached with a little gum, or wafer, &c.: then, take the bight up, and attach it to the centre of the glass cover, so as to correspond exactly with the cables; as the ship turns round, so must the compass card, and the silk threads being fixed to it, must turn round equally fast with the card, therefore, the bight of the thread being fixed, must be stationary. If the two threads represent the bearings of the anchors, the bight attached to the glass must represent the cables at the ship's hawse; therefore, whatever turns you have in the ship's hawse, the same will be in the threads. This plan will enable the

commanding officer, at all times, to know how the hawse is, without reference to the quarter-deck; it would also denote what tack the ship had been the most on. This method of using the compass would save many oversights relative to the hawse. I can hardly recollect the numberless instances of ships that have always had their hawse reported clear, until, by some chance, they were wanted in a hurry. I very well remember being told by several officers of a ship ordered to prepare for sea in great haste, that they had commenced to heave in, when, to their astonishment, they could neither veer, or heave in the cable, the ship being rather slackly moored, the turns had not been noticed; they began to clear hawse, and to their great annoyance, took out nearly twenty turns before they could unmoor the ship, though the hawse had been reported clear, and appeared so continually: in the above case, it was on a very fine weather station, and the ship never had sufficient wind to bring her cables taut. I have seen and heard of numberless cases with rather slack moored ships, commencing to clear hawse, as they supposed, to take one turn out of the cables, and finding, perhaps four or five, instead of one.

Warping along shore in chase.

This is a scene of the greatest possible animation; you are in chase of a vessel nearly your own force; at any rate she is too great a force to attempt carrying her with the boats; you have every possible sail set, but just as you are within a few miles of the land the wind dies away, until at last it becomes a perfect calm. Suppose the chasing ship a frigate, the water from twelve to fifteen fathoms. Hoist out and lower down all boats, have two of your heaviest kedges ready for your boats to run out as guess warps, form them into two divisions for towing out the kedges (which should always be boated if possible), send the first division of boats

away immediately in what you consider the best direction. Have everything quite ready on both sides of the main deck for warping ship, cabin bulk-heads down, Sampson's posts close aft as you can, deck well sanded, fiddler and fifer all ready to strike up any favorite tune amongst the ship's company. The moment the end of each hawser enters the hawse-hole, away with it, strike up fiddler or fifer, and make a clear run fore and aft the deck until you get in the slack; then proportion your force to insure the holding of the anchor: the second division of boats should start the moment the first hawser reaches the spot, and so continue working the kedges out and in. In the *Belvidera*, when the squadron under Sir Philip Broke, in the *Shannon*, chased the United States' frigate, *Constitution*, this chase was on soundings, and kedging was had recourse to by the squadron, and the American frigate also. This is a case in point, which clearly proves, that in calm weather, the sails should be furled, or as little exposed as possible, as the sails create a resistance in proportion to the ship's velocity through the water.*

Courses single sheets.

Courses seldom set well with single sheets on a wind; the eye-bolts for the standing parts of the sheets are put well down in the ship's side, in order to give the lee-clews a good line when the sheets are aft; consequently when you single the sheets, the clews of the sails are brought several feet above the proper line; in this way you may get the foot of the courses taut, but you will have several cloths of the lee-leaches hanging quite slack. Whenever it was requisite to single tacks and sheets, I always preferred single tacks and double sheets of a much smaller kind of rope, which was kept

* It will be desirable to have a fast-pulling boat, with a small coil of hawser in her, ready to start at a moment's notice, to meet either of the kedging-boats that may have guessed the warp short of the ship.

for that purpose, and I invariably found the sails stand much better for so doing.

On ships of the line working their cables on the middle or main-deck.

If ships of the line generally could work their cables on the middle or main-deck without taking from their strength when riding out gales of wind, &c., it would make their main battery much more independent when about to engage at an anchor. This would prevent the attention of the men on the principal battery from being taken off, by either anchors or sails. Ships of the line are much inconvenienced when anything takes place suddenly about their cables at night, when the hammocks are down; and they are at all times more likely to be noisy when working their anchors and cables, from this work being done on the mess-deck, and with the guns generally run in.

Coal tar.

This tar, from drying much quicker, and giving a smooth and glossy appearance, is often too much used on that account, for the purpose of tarring the standing rigging; but as the heating and searching nature of coal tar tend very much to dry up even the very heart of rope, and thereby destroy it, this practice should be discontinued as much as possible, as it is the opinion of many good seamen that vessels have often lost their spars and rigging, from too frequently using coal tar. Stockholm tar, which is the tar allowed for the purpose of tarring the rigging, on the contrary, nourishes and revives the rope throughout; but coal tar dries it up, and deprives it of the very nourishment which the rope is made with, viz., Stockholm tar. After the inside yarns become dry, from frequently using coal tar, the rope then imbibes the moisture more freely, and consequently sooner decays. If a ship had

to be worked off a lee shore in a gale of wind, the same confidence could not be placed in rigging which had been continually blacked with coal tar, as if the same rigging had always been tarred with Stockholm tar; and this is made more evident in tropical climates, where the heat of the coal tar, acting with the heat of the sun and heavy dews at night, all work together to destroy the rigging; whereas Stockholm tar fosters the rope and makes it impervious to the weather.

Commanders of ships of the line.

As the arrangements of ships of the line differ so much from all other vessels, it would seem to be worth consideration, whether it would not be desirable that candidates for commanders of ships of the line should not have served some short time as lieutenants of such ships, previous to their becoming commanders of ships of this class. I am strongly impressed with an idea that an officer who has not previously served in a ship of the line, until he becomes the commander of one, cannot enter upon his duties with the same confidence as he would have done, had he previously served in a ship of this class. The internal arrangements of such ships are so different to frigates and all other vessels, that it requires a previous knowledge of such arrangements, before an officer becomes the commander of a ship of the line. There have been many instances of commanders being appointed to these ships, without having served a day in one previously to their appointment. Now as far as the actual seamanlike duties between a ship of the line and any other ship, there can be little or no difference, excepting that the spars, rigging, sails, and all her ropes, are larger than single-decked ships generally. This increase of spars, rigging, sails, and ropes, bears no proportion to her increased crew, her crew being in proportion to her guns, and not her spars, &c. This increased crew

again, have to work in a much smaller space when the hands are on deck, than any single-decked ship, consequently are much crowded. An officer accustomed to serve in a single-decked ship must bear in mind, that as they increase the size of ships and their number of men, they cannot enlarge the hatchways in proportion to their increased crew. This is more forcibly impressed on the mind, if you attend on the main-deck when the hammocks are piped up or down, so much so, that many officers consider it advisable only to pipe the hammocks of one watch down at a time; and even then you have more hammocks going down at a time than most frigate's ship's companies. Let an officer who has never served in any but a single-decked vessel, go from thence to the lower deck of a ship of the line, and if he do not find ample room for reflection on the difference of the organization of the two ships, it will be extraordinary. The internal arrangements of a frigate are simple when compared with a ship of the line, more particularly when clearing for action; but the difficulties of a ship of the line are increased tenfold when she has to prepare for action at night: seven or eight hundred hammocks must be stowed away quickly if done in less than nine or ten minutes. Then come tables, stools, mess-things, and sometimes bags, &c. Most officers are of opinion, that a ship of the line deserves credit, if she can have her hammocks stowed, and everything quite clear, and fire a broadside in from twenty to five-and-twenty minutes. A frigate if surprised, may commence action with her hammocks below, by merely taking down those hammocks which are in the way of passing the powder along; but with a ship of the line it becomes imperative they should be stowed, as on that deck she has her chief battery. I have merely mentioned a few out of the numberless cases showing the difference between the arrangements of ships of the line and frigates, with the view of pointing out that commanders of ships of the line would be better qualified

to fill that important situation, if they had previously served some short time in a vessel of that class.

Tarry canvass for stopping leaks.

Tarry canvass may often be made most useful for stopping leaks, when neither wood or lead can possibly be used on account of the working of the ship; lead or wood are soon broken by the opening and straining of timbers or planks, but number one canvass well tarred and nailed on slack, will keep out much water. This has been tried on several occasions when ships have been in great danger from numerous leaks, and found to answer well. In ships where carpenters are scarce, or in prizes, this can be done by any seaman.

On the midshipmen's chests being kept in the men's messes.

When midshipmen's chests are placed in the men's messes with the intention of keeping a clear steerage, it is unfair both to the midshipmen and the ship's company, as the midshipmen cannot go to their chests without great annoyance to themselves and to the men in their berths, through which many trifling complaints are frequently made; and as their chests are much more unguarded in the men's messes than they would be in the steerage, under the sentry's charge, it throws a responsibility on the men by no means pleasant or fair to them. We all know that young men are not as guarded as they might be about exposing their money, &c., or sufficiently careful about locking their chests, and in every large body of men there are some that it would not be desirable to throw too much temptation in their way. This way of stowing the young gentlemen's chests often obliges them to wash and dress themselves, mixed up with the ship's company; and this cannot be considered right for many reasons, besides the inconvenience to the midshipmen, and being in the way of

the men while cleaning the lower deck, as their dressing, and lower deck cleaning are frequently going on at the same time. Youngsters, from continually mixing themselves up with the ship's company in this way, sometimes acquire habits which cannot be beneficial to them. When the young gentlemen's chests are kept in the steerage, there cannot be a shadow of a reason for their being too much amongst the ship's company; but when the chests are stowed in the men's messes, they have always the excuse of going to their chests. This misapplication of stowage is attended with too much danger and inconvenience to be trifled with.

Collision.

Vessels often run foul of each other from being over anxious to keep clear. We will suppose a case; for instance, two vessels are passing each other exactly in opposite points of the compass: to carry out our views better on the subject, we will suppose one to be a sailing vessel dead before the wind, and the other a steamer; we will farther suppose, from the darkness of the night, or foggy weather, the two vessels are just about to pass each other close on the port side; but at this moment both vessels call out "hard a port," from which circumstance both sterns are thrown together in passing, instead of which if a moderate quantity of helm had been given, or they had reversed the helm as soon as the fore bodies were clear, the sterns would have been forced in an opposite direction and consequently kept clear of each other. In putting the tillers hard a port, the rudders of course go over to starboard, consequently, as the vessels pass through the water, their sterns are thrown together. This arises from the stern of a vessel moving, and not the head.

Chasing an enemy.

When you come up with your chase, on no account lower a boat down, until you are certain of your prize, by making

her run close under the muzzles of your lee guns, and more particularly if the vessel is fore and aft rigged.

Jacob's ladders on lower caps.

In large ships, Jacob's ladders one on each side of the lower caps, secured by eye-bolts on the top of the caps, and set up to the eyes of the lower rigging, will be found convenient for the men stationed in the bunt of the topsail yards, in furling, and loosing sails, &c., &c. It prevents your topmast rigging from being crowded to excess, which must be the case more or less without them, in ships of the line. I have seen them tried, and found them most useful.

Bending a course in blowing weather.

The head of the sail should be stretched across the deck as near as possible: bend the gear, then bring the leaches of the sail as near where it should haul up on the yard as you can, then stop your sail well about every two or three feet; besides your yard burtons, have one in midships of the sail. When ready man all together, and run it up to the yard; you will then be able to bend and furl the sail with very little difficulty.

Cap shores.

These necessary props for the fore-part of the topmast and top-gallant caps are sometimes taken away with an idea of making the ship look neater aloft; but to a seaman that neatness which takes away from the efficiency of a ship is not thought desirable. If the cap shores are removed for any length of time, the caps will droop on the fore part sufficiently to impede the fidding or unfidding of the masts; and if the rigging should at any time, while carrying sail, allow the masts to bind in the caps, they would be much more endangered, than if the caps were kept in their proper places by

the cap shores. In harbour, the topsail and top-gallant yards are generally kept much nearer their caps than when at sea; therefore, while exercising sails in harbour, the yards will now and then strike the caps with great force, which will still farther shew that the cap shores ought never to be taken from their places.

Club-hauling.

This is a manœuvre of vital necessity, when a ship is on a lee shore, without room for wearing, and if she stand on, must inevitably go on shore; and mostly takes place in blowing weather with a heavy swell, therefore, in order to make sure of the ship's coming round on the other tack, you must club-haul her or anchor on a lee shore.

Club-hauling is executed in the following manner. Have all ready for going about, and hands placed by the lee bower anchor, with every thing quite ready to bring the ship up with the scope of cable you think will be requisite, proceed to tack the ship, and if she make a stand before she comes head to wind, let go the anchor. When the ship is head to wind, haul the after-yards, and slip the instant you are certain of her casting the right way. When the wind is nearly abeam, haul the head yards. A ship may perhaps be placed in the same situation as to the land, with the wind moderate, and the swell sufficient to make it doubtful whether she will tack, or not; in such a situation a kedge might be sufficient to insure the tacking of the ship. Club-hauling on many occasions, might be made most useful to steamers when in a narrow channel, or in blowing weather on a lee shore, and owing to their great length cannot otherwise be brought round. In such a case, when the steamer comes head to wind, her anchor might be saved with care and attention, as she would then have her full propelling power in the right direction, namely head to wind and right off from the danger.

To take in a Driver.

We frequently hear much more made of taking in this sail than it deserves. I have seen some very excellent officers take it in without the slightest difficulty, in the following manner. Man your lee cross-jack brace and driver brails well; when ready, haul in the lee cross-jack brace, until the lee yard-arm is sufficiently clear of the driver; when the driver sheet is enough off to make the driver shiver, then brail up, and your sail will run up with the greatest ease; when done, trim your mizen top-sail.

How to make a dismasted vessel's hull useful in propelling her.

On the side you wish the vessel to keep her wind on, as far forward as possible, rig out a spar or spars, according to the size of the vessel; lash and secure them with their outer ends well forward; guy them in the position you have placed them. With your steering sails, or any other sails you think will answer best put together, take a sufficient quantity to cover the outside of one side of the vessel; at each end have a good strong yard, and be careful that neither yards or sail are too near the water; secure the after yards as near perpendicular as possible on the weather quarter; then as near at an angle

of two points before the beam as possible, lash your burtons on the spars for hauling out the foremast yard, and spreading the sail, so as to cover the side of the vessel from the quarter to forward as taut as a board. Of course, the angle from the quarter to forward will depend on the length of spars you are able to secure outside of the vessel; if you can afford to rake your spars forward, you will have more sail; if on the contrary, you are obliged to bring your spars more athwart ships, it will give you a better angle, but less sail. At any rate, by this means, you will make your vessel more steady, keep her head nearer her port, and probably be able to get a couple or three knots out of her with the wind abeam, or perhaps a point before it. These are points worthy of consideration. The late Capt. Pole tried a sail in the manner I have described on a boat; he told me he was surprised at the power it had in propelling the boat with the wind about one point before the beam. I have little doubt that a sail so set might be made useful on several occasions.

Stoning decks.

In very cold weather, when necessary to stone the decks, I have always thought it preferable to dry holystone the decks first; then scrub and wash them afterwards: by this means you keep the men from being too long exposed in the cold water. The decks always appeared to me to look as clean from this method as when they were wet holystoned. This way of doing it certainly does not keep the men half the time in the cold water, neither have they the same chance of getting their clothes wet, as in kneeling to wet holystone they cannot well avoid wetting their trousers, &c. By having the fiddler to play to the men while stoning the decks, I have invariably found that they have rubbed harder, and kept time to the music; this method will prevent that chit chat which you so often hear between the men while stoning the decks, their

attention being quite taken up with their work and the music. It always struck me that the decks were better and sooner done in this manner, and the men in much better spirits.

How to ascertain when the ship is driving in blowing weather.

Many seamen of former times had recourse to the following method to know the exact moment when a vessel commenced to drive. To a grapnel, or boat's anchor, bend a good strong rope; from the bowsprit end swing the grapnel or anchor well forward right ahead; take the slack of the rope well in through the bow-port, and have a good seaman stationed there to attend it. To the best of my judgment I consider the above method has many advantages over the deep-sea lead: in the first place, the grapnel being right ahead, therefore in the exact line that the ship will drift if at single anchor, and in a better position than the deep-sea lead even when moored: secondly, the weight of the grapnel tells you more decidedly whether the ship has parted her cable, or not; and this gives you an opportunity of acting promptly with anchors, or sails: thirdly, you are not so liable to false alarms about the ship drifting, as when the deep sea lead is over the gangway, because, when the ship sheers, she must drag the deep-sea lead more or less over the ground; but the grapnel rope being ahead cannot be affected so much by the sheering of the ship. This method is very well worthy the consideration of the seamen of the present day.

To weigh and make sail with danger close astern, and the wind blowing dead on the danger.

In this position it will be found advisable to heave in to a long stay, and then kedge the ship sufficiently clear of the danger, for making sail; picking up your bower anchor as

soon as up and down, cat it, and hang it by the stopper ready to let go, if necessary. The size of the warps and anchors must entirely depend on the state of the wind and sea, and the scope for making sail from, governed by the same circumstances. We have seen the following method of making sail from a kedge frequently practised in moderate weather. We will suppose you wish to make sail on the starboard tack, hoist your topsails and top-gallant yards to suit the number of reefs you mean to keep out; brace all your yards sharp up for the starboard tack, and have everything ready for making sail, excepting sending the men aloft. When you come to the last warp, mind to have it well on the starboard bow, if possible, as it will give the ship a better chance of sheering. When you have good way on the ship with the last warp, have one watch ready for loosing and making sail; the other watch, or watch and idlers, walking the ship ahead. The moment the cable is nearly a short stay, put the helm a-starboard, and hoist the head-sails as soon as they will act, this will cant the anchor out of the ground, and pay the ship's head sufficiently off to make all sail on the starboard tack, while the other watch are walking the kedge up to the bows. In all cases of this description, the bower anchors should be ready for letting go, until the ship is entirely out of danger.

Down-haul tackles for topsail-yards.

It would be much safer for the men stationed aloft, spars, and rigging, if down-haul tackles were more generally used in blowing weather, more particularly in the winter season, in cold climates. I have often been astonished to see how little this most useful purchase is used. The top-sail clewlines are in most ships made to do the double duty of clewing the sail up, and hauling the yard down. The lee clewline, from binding across the topmast rigging, until the yard is nearly square,

cannot be of much use; therefore the whole strain is brought on the weather clewlines, and that at the angle of the weather lower yard-arm, consequently, pulling the lee side of the parrel against the mast; let this be coupled with rain and blowing weather, which will increase the difficulty of getting the yard down, thereby endangering the carrying away of the weather clewlines, and the chance of the lee one following it. Under all circumstances of bad weather we think a down-haul tackle will pull fairer, and prevent the chance of the top-sail-yard flying to the mast-head, and endangering the masts and rigging.

Working on main-deck.

In many ships, from the time of their commissioning to the time of paying off, or nearly so, the artificers, when employed, work on one side of the main deck, and the other side is kept for a show side. This plan cannot be considered a good one, as it does not give the men stationed on the two sides of the deck the same chance, either in keeping their guns clean, or the deck; besides, it has this bad effect, the artificers feel that they are intended to be kept out of sight, consequently they become negligent in their dress, do less work, and make more noise. Where one side of the main-deck is continually used for all purposes, and the other made a show side, the two sides seldom appear as if belonging to the same ship. The port side is mostly the show side; and I believe this originates in the ladders from the quarter-deck to the main-deck, invariably taking you to that side of the deck. I think it will be generally admitted, that if the artificers were to work an equal number of days on each side of the main-deck, that they would stand a much better chance of having themselves and their benches in better order; and then both sides of the deck would be equally clean and well kept.

Top-gallant yards and masts sent on deck.

When top-gallant yards and masts are sent down from blowing weather, they should never be kept up and down the masts, as they are much in the way of striking lower yards and topmasts, more particularly if allowed to remain so until night. We have on several occasions seen ships riding out fresh gales with their top-gallant yards and masts in this manner on each side of the collar of the lower stays, when for every good reason they ought to have been stowed on the booms, and the mast and yard-ropes hauled up in the tops clear for striking lower yards and topmasts, or working the yards, if required; instead of which, we have seen the yards pointed to the wind, with the top-gallant masts and yards up and down, thereby chafing the bunts of the sails, stays, &c.

Sanding and sprinkling decks before going into action.

It has often occurred to me that if more attention were paid to these two things before going into action, that we should have fewer chances of explosion on the fighting decks. The decks of a ship of war are generally so smooth from frequent cleaning that a light sprinkle of water and sand would tend much to check that excessive recoil of the guns when much fired, and give the men a fair footing for working the guns well. Wetting small sails, &c., before going into action, is generally recommended by the best officers.

On disrating petty officers.

When it becomes requisite to disrate a petty officer for bad conduct, it will be desirable that he should be removed from that part of the ship in which he has been accustomed to do his duty; if this is not done, you do not give the man a fair

chance to reclaim himself, as he becomes more liable to taunt and reflections from those whom he has been in the habit of commanding, than if his duty had been changed to another part of the ship. For instance, if one of the captains of the main-top should have, on investigation, behaved himself so ill that it is found requisite to disrate him, and you should rate a man from amongst the main-top men of the same watch to succeed him, you aggravate the punishment of disrating by souring the man's disposition, and the chances are much against that watch of topmen working as well together, as if the disrated petty officer had been put on the forecastle, and the main-top vacancy filled up with one of the smartest of the mizen-top men, or most seamanlike of the first class boys, as the case may be. If you remove the disrated petty officer to another part of the ship, you decrease the chance of bickering about what Jack so and so did when he was captain of the top, &c., and render the disrated petty officer's situation less annoying from not being obliged to do duty with those men he had previously been accustomed to command. In this way he will much sooner become reconciled to his altered situation, and consequently do his duty with more cheerfulness and satisfaction. Strict justice and great judgment should be used before disrating a petty officer, for almost every disrated petty officer, more or less, becomes a discontented man, at least for a time; therefore, it would be well, if when obliged to disrate them, for the sake of example, that it should be done with the least possible annoyance beyond the loss of their rating, as an example only. It is worth serious consideration, whether cutting off all hope from a petty officer when once disrated, of ever becoming a petty officer again, at least in the same ship, however good his future conduct may be, is either desirable, beneficial, or just. We are all frail mortals, and therefore "Hope," the emblem of our profession, should never be separated from us.

On using the drum.

In some ships the drum is never used for calling the ship's company together excepting for action, or general quarters. There cannot be a doubt about this plan working well during war time, or any ship where the guns are made the first consideration. I was in one ship for three years, where the captain never permitted the drum to be used for calling the crew together, excepting at general quarters, during the whole of that time. This plan has the good effect of making the ship's company feel immediately that they can only be called for one object when they hear the drum beat; an enemy to fight. But when the drum is used on every trifling occasion, its sound does not strike upon the ear so as to call forth all the energies of the crew at the moment, and this at a time when seconds are of more consequence than hours would be at any other time. The more distinct sounds and calls, for all duties of consequence, can be made on board ships of war, the quicker, more orderly, and more silent the ship's company will be in going to those duties; and this arises in a great measure from knowing exactly what they have to do.

A rainy day.

At an anchor when a ship is well secured, safe and snug aloft, and has previously had time to fit her spare gear, make wads, spare points and sea-gaskets, &c., after all this is done (without which no vessel of war can be in an efficient state), when a thoroughly rainy day sets in, it will be better now and then to give it to the ship's company for making and mending their clothes, instead of so continually applying it for working up junk, and exercises which cannot be properly carried out, &c. In these days of chain cables and consequent short allowance of junk, it is of the greatest consequence that all possible care should be taken of this article —and every sailor knows that on a rainy day much junk is

so spoiled that it cannot be used afterwards for anything but oakum. A miserable rainy day depresses the spirits of almost everybody more or less, whether on shore, or on board, but more particularly on board ship, where there is so little amusing novelty. If you pipe the hands to make and mend clothes, you then give employment to all the men on the lower-deck one way or another. The crew feel more at their ease during this time than they do at any other; those who have clothes to make or mend go about them; some read, some write, some have a thorough overhaul at their bags, putting a stitch here, or a patch there, &c.; here and there a man trying to make his mess look smarter; a few songs going on in different parts of the deck; now and then a violin scraping, or a flute striking up. Nothing pleases a ship's company on a rainy day more than letting them have a good overhaul at their bags; by doing this, they all feel at home, as they know they will not be disturbed by the sweepers, or lower-deck arrangements, until the lower-deck is ordered to be cleared up. In this way the men are made happier in their little improvements and amusements during a miserable rainy day. The time given to the ship's company, on such occasions, could not be better employed, and tells well in the appearance of the men's clothes. When this indulgence is given on a rainy day, a ship's lower-deck becomes a scene of merriment and fun, and the service gains by it in the long run in every possible way. Whatever tends to order or arrangement in the way of the men making or mending their clothes, taking pride in keeping their bags and messes neatly, &c., gives the habit of order, and you invariably see the best men the most cleanly and most careful about the neatness of their dress, &c. In many ships the hands are only allowed a few minutes to take their clothes out of their bags for that purpose, and then stow them again; this must be allowed to be a very neat way of keeping the lower-deck clear, however, it does not

give the ship's company the same satisfaction as if you allow the men to have their bags until the decks are cleared up; then they have an opportunity of seeing all their little worldly property, giving their mustering suit a brushing, taking a little parcel out of some snug corner of their bags, and reading letters from wife, mother, child, or sweetheart; or now and then taking a peep at the certificates from former ships, and the elderly ones having an eye towards calculating their time for a pension. Some telling yarns of battles, or smart things done by former ships. Between making, mending, reading, writing, songs, music, long stories, examination of bags, messes, &c., they are as highly amused and as happy as a rainy day will permit. Only those who have taken a quiet trip round a ship's lower-deck at such a time, can fully comprehend the numberless ways a ship's company have of employing and amusing themselves, and the more they are left to themselves the greater their enjoyment.

Exercising Midshipmen aloft, and in the duties of a Seaman generally.

The practice of exercising the young gentlemen aloft in the various duties of a seaman, appears to have much diminished in the navy; yet we think those officers who perfectly understand the difficulties which seamen have to contend with while doing their duty aloft, from their own previous practical experience, must have a great advantage over those officers who only understand that part of their duty theoretically. The officer who has himself had to haul out a weather earring will more fully appreciate the advantage of having the yards well laid, and the reef-tackles hauled sufficiently out previous to the men lying out on the topsail yards, and will more fully see the increased danger of hauling the reef-tackles out after the men are on the yards. The necessity for laying the yards well for reefing the sails, will then be more self-evident to him who has had to experience this difficulty. The use of the rolling-tackle he will be more likely to attend to, if he has himself had a few jerks on a yard when the ship has much rolling motion; a rap on the head with a top-gallant sheet may perhaps make him remember for the future, the top-gallant sails had better be clewed up while reefing topsails in a fresh breeze: and nothing gives an officer a greater proof of the uselessness of indiscriminate hailing, than when he has himself been subject to such hailing. When midshipmen have been early accustomed to exercise once or twice a week in the various duties of a seaman, aloft, we have invariably seen them most useful in cases of great emergency in sails, spars, rigging, &c.

Forenoon exercises, great guns, &c.

If the different portions of the crew selected for exercise are warned while mustering by divisions, it will much facili-

tate the different exercises, as the men on leaving their divisions would then go to their different exercises, instead of having to be called for after they had left their divisions and gone to their different parts of the ship, or below, which not only takes up much time, but occasions much unnecessary noise and trouble. There is so much real necessity for calling men, more particularly where ship's companies are large, that every possible means ought to be used to curtail the calling and piping of the boatswain's mates. Whenever circumstances will admit, the divisional exercises for the day following, should always be written the day previous, and placed on a board in some conspicuous part of the ship. Ships of the line are proverbially more noisy than frigates and smaller vessels; but this may be, if not carried to too great an extent, without the ship of the line being in worse order than the frigate, or smaller vessel, which is not quite so noisy. The cause of the increased noise in ships of the line, is from the increased number of men working in a smaller space in proportion to other vessels. 2ndly. When masts, yards, ropes, and sails, are so much larger, it takes more men to do the same thing; consequently in smaller vessels, whatever can be done by one man, from smaller ropes, &c., is done more noiselessly, and everything else in proportion, from smaller numbers of men being required. When a ship of the line is exercising her masts, yards, sails, &c., with the hands on deck, her number of officers tend much to make her noisy; but let the same ship have either of the above things to do with her watch, and she is much under-officered according to her number of men, more particularly in ships where the forecastle watch is not kept by a lieutenant. When a ship of the line is mooring or unmooring, warping, or doing anything with her cables or anchors on the lower deck, she then becomes noisy, from the distance these duties have to be done, from under the eye of the commanding officer. If a trumpet

were put in some convenient place near the main-mast, that the commanding officer might communicate his orders to the lower-deck when he thought it requisite, it would save much calling and piping on board ships of the line. A small vessel may be kept in order by vigilance and perseverance on the part of the commanding officer, but in a large vessel, order cannot be effected without system being added to vigilance and perseverance.

On general exercises.

Having specified days in the week for general exercises, tends much to good order and system. When regular days in the week are appointed for this purpose, it does not follow that the point on which the admiral or senior officer intends to exercise the fleet or ship on, should transpire, until the moment the signal is made for performing that evolution. When there are stated days for general exercise, every officer and man feels that on those days he will have a certain quantity of active exertion to go through, and therefore goes about it with zeal, spirit, and activity; but in ships where regular exercising days are not observed, both officers and men are kept in a continual state of uncertainty and excitement, from not knowing on what day, or at what time throughout the day, some evolution may take place. In this way most of the routine duties and daily exercises of a ship are left undone, or improperly performed, entirely from over-anxiety to keep the men ready at all points for any exercise. This mode of exercising places captains in a complete state of doubt in giving their officers and men leave, as they cannot tell at what moment some exercise may take place requiring the full exertions of the whole crew. But when there are stated days for general exercises, leave takes its regular course, the regular duties of the ship are properly performed, the divisional exercises of great guns, small arms, cutlasses, &c., are properly

attended to, and the artificers and seamen go about their daily occupations; but when these duties are continually disturbed or neglected, it works much against the efficiency, good order, and discipline of a ship of war. The injury done to the Service by this mode of exercising is not counterbalanced by the good done by shifting spars, sails, &c., by surprise. For instance, if one senior officer thinks proper to make three stated days for general exercise in the week, and as such general exercises are mostly over before twelve o'clock, these three general exercise days would not inconvenience the routine duties and exercises of a ship more, or perhaps so much, as if another officer only exercised them one day in the week, but that day uncertain. This latter practice, from its uncertainty, operates unfavourably on the mind and temper of officer and man, interferes with the daily progressive exercises and improvement of the crew, and sows the seed of discontent, which may at last disgust, and undermine the discipline of the best ship's company.

Another ill effect of this mode of exercising ship's companies, is the tendency it has to make the men very careless in their dress, as they are often obliged to shift masts, yards, or sails, with their good clothes on; whereas with regular exercising days, this is avoided, as the men are prepared for the occasion by putting on their worst clean working dress. The Navy is a Service of emergency, consequently when such cases arise, you cannot give a second thought about the dress of the officers or men; but on all occasions when the nature of the Service will admit of it, too much care cannot be taken to avoid unnecessary wear and tear of the men's clothes. No doubt ships should be surprised now and then, to see that they are ready at all points, and at all times, both day and night; but what I wish to observe is, that when general exercises are ordered with the intention of teaching the men, that it will be found best, not only for that purpose, but for the exercises,

duties, and discipline of the Service, to have stated days for the general exercises. It is the combination of previous daily progressive exercises which are the ground-work of all good general exercise; therefore, whatever interferes with the progressive teaching of a ship's company, must have a bad effect on all general advancement. Whenever too much smartness is expected on first commissioning a ship, she seldom advances to the same degree of perfection in her exercises and discipline that she would have done, had more time been allowed at first, and more care taken to have the duties well understood and satisfactorily done in detail. The crew as they gain knowledge, gain confidence, and confidence soon begets smartness; but where too much smartness is expected from the crew at first, the detail duty and exercises are often slurred over, and continue so, sometimes as long as a ship is in commission; and she seldom obtains the character of a smart ship. To have the full spirit and energies of a ship's company, general exercises should not be too frequent, and the divisional and progressive exercises should be done as much as possible in the watches on deck. After a ship's company are perfectly up to their work at all points, any exercise beyond keeping them so, only defeats its own object, as in over-exercising lies much of the dislike which seamen have to the Navy. I have heard officers say, who stand high for their knowledge of the management of seamen, that the great secret of keeping a ship's company in good humour is, to cease from harassing when they know how to perform their duty; give plenty of leave, and never disturb them, if possible, during their meal times, or their watch below.

On the general exercises being more progressive than they usually are in ships of war.

I have long been impressed with an idea, that on the first commissioning of vessels of war, progressive teaching in the

different exercises might be more advantageous to the Service. If you expect too much smartness at first, that is, before the crew have had some slow exercise, understand their stations well, and fairly comprehend the working of the ropes, you will be disappointed. You may witness the men move smartly about the yards and rigging, but nine times out of ten their work will not be well done. For instance, in reefing topsails the earrings will not be well passed, and the slack canvass not pulled up; many points will be left untied, all which seldom happens in a ship where progressive teaching has been attended to. The practice of hoisting the topsails before the earrings are well passed, and all the points well tied, does much to give the habit amongst the crew of slurring over their duty. That smartness which slurs over everything for the sake of effect at first, will continue to do so until the end. The ship which teaches her men progressively, may at first be beaten by the ship which is all smartness from the first; but let the same two ships meet a few months afterwards, both having had the opportunity of exercising according to their different plans, and I believe there will be little doubt but the crew which have had progressive teaching will do every evolution in a more seaman-like manner, and most likely beat the other ship at the same time. What can more clearly define what I wish to express, than the present great gun exercise in the Navy. In this exercise the men are taught progressively, and finish by the most rapid movements. I am clearly of opinion, that if progressive teaching were more generally observed, we should have less loss of life from accidents; that we should make better seamen, and our ships would in consequence be better managed; there would be less confusion, and as the seamen would understand better what they are about, and work well together, there would be fewer causes of complaint. If in shifting masts, yards, or sails, &c., in newly commissioned ships, if so much were not

expected for the first few times, every man would then more perfectly understand what was expected of him at his station, and would soon become acquainted with the best manner of performing those evolutions when they are expected. When a ship commences with haste, she generally finishes in the same manner. Stations cannot be so strictly attended to; the smartest man on such occasions will always take more than his own duties upon himself, which in a manner retards the steady performance of any particular exercise. But when the crew have been accustomed to work together by previous slow training, they will be more likely to work well in cases of actual necessity.

Some few remarks on the Fire Bill.

The ship's company should never be exercised by the fire bill without previous notice being given. For instance, if you intend exercising by the fire bill in the forenoon, let the word be passed at breakfast time that you intend to do so, but without permitting the least preparation to take place; by doing this, you have the instantaneous energies of every man in the ship when actually required for this service. The ship's company should perfectly understand that it is scarcely possible that so severe a fire can break out in a man of war, as to prevent its being extinguished, if the directions in the fire bill are strictly attended to, and it is hoped will not be alarmed at an accident which is by no means so dangerous in reality as in appearance. The first person who hears the alarm of fire should quickly, but quietly, make it known to the captain or commanding officer. Should the ship be at sea, it should be borne in mind, that the draught of air will be considerably lessened if the ship is put before the wind. The courses, and all the lower sails, should be taken in as quickly as possible; and as it will facilitate drawing the water, and help much to steady the ship, the yards had better be kept braced up as if for casting. The riggers should take all the windsails down quickly. Officers should not leave their stations, but communicate through the midshipmen of their stations. It is the most serious duty of the master-at arms to attend to any persons that may be confined, or in irons. The different stewards should repair to their store-rooms with their keys, but on no account to attempt to open them without orders. The decks ought to be flooded as much as possible ready for scuttling, therefore no one can do wrong in starting water on the decks instead of waiting for empty buckets. A corporal of marines should take charge of the spirit-room under arms. The marines should go to their sta-

tions unarmed. If pitch or tar should take fire, the ship's company are to understand it is only to be extinguished by excluding the air, which must be done by covering it with anything at hand, as throwing water does not appear to diminish the flames. The fire bill differs from all other station bills, since the men are not only to repair to their stations, but commence upon their respective duties, without waiting for the first orders from the officers. As fires have frequently broken out in the different store-rooms, it would be better if the stewards and yeomen were obliged to be more careful in returning the keys of the store-rooms at sunset. The keys of the spirit-room and afterhold should be kept in the master's cabin, and always hung up in the same place. We have known the spirit-room to be made free with from not returning the keys when done with to the master's cabin. If a ship has a good fire bill, by which I mean an expeditious way of closing out all air and draughts as much as possible, by covering hatchways, shutting ports, scuttles, hawse-holes, stern and quarter gallery windows, sky-lights, &c. The scupper plugs well driven in ready for flooding the decks. All the pumps ought to be rigged, and the caulker, or one of the carpenters to turn the cock of the wash-deck pipes immediately, or whatever other means there may be of letting water into the ship. Hammocks, wet blankets, &c., have also been found most useful on these occasions. As the men finish their duties, they should quietly but quickly return to their quarters, and then wait until called by their numbers. We can perfectly understand that a merchant vessel may soon be burnt for the want of means and force, in every way, to extinguish the fire; but if a man-of-war take fire in any place not openly exposed to a strong wind, we think there can be little doubt of its soon being extinguished. In well disciplined ships, extreme cases of emergency are always most provided for; this gives confidence to the crew, and out of this confidence, inspired by

good discipline, arises coolness, quickness, and good order, which, with the aid of a good fire bill, ought to diminish the chances of fire getting to any extent in ships of war.*

Flags.

If the distance lines are plaited, you have a much better chance of keeping the flags clear of turns. It would also add to the quickness of making signals, if small copper thimbles were put in the running eyes of the distance lines.

On the fore-yard being carried away in narrow waters.

When the fore-yard is carried away in a position requiring sail to be set quickly on the fore-mast, the following plan is recommended by some of the best seamen in the navy.—Replace the broken fore-yard with the main-top sail yard, to which, bend and set the main top-sail as a course, proportioning the number of reefs to the tauntness of the mast, and as the cross-jack yard and main top-sail yard ought to be of the same size, replace the fore-top sail, by setting the mizen-top sail bent to the fore-top sail yard; of course when you have plenty of sea room, one of the numerous methods of fishing or making a jury-yard had better be adopted.

It may be of consequence to bear in mind that flat iron bars have been used for fishing spars, by letting them nearly flush into the wood, and hooping them well over. The *Asia*, in the Mediterranean, fished her fore-yard in this manner, and it was found to answer very well. Her commander informed me that shortly after the fore-yard was fished, the ship had to work to windward in very tempestuous weather, and that the fore-yard did not complain.

* The surgeon and his assistants should attend to the sick, on the alarm of fire.

*"Incalculable are the evils which may result from the "springing" or snapping of a lower yard, especially the fore one. A ship may be placed in so perilous a situation, and time so pressing, that the very existence of the vessel may depend upon the *dispatch* with which this important spar can be repaired and replaced. The following strong and expeditious method has been twice tried, and with eminent success.

"If the yard be severed, get both pieces down on deck, and place them together to assume, as nearly as possible, their original position. Hollow out, so as to fit the cylindrical surface of the yard, two square anchor-stock pieces; in doing which, a depth of two, or three inches will suffice. Place one piece on the top, and the other secured to the under part of the yard. Towards their extremities dub down the superfluous wood, and round the edges ready to receive the requisite wooldings.

"Preparatory to boring holes for the bolts, set close to the anchor-stock pieces, with wedge upon wedge. Introduce then eight or ten bolts of inch or three-quarter inch diameter, which must be severally clinched. Cut scores for eight, or ten wooldings, and woold away, with *well stretched* rope of three, or three and a half inch. The yard may then be replaced aloft. There will be found no necessity for studding-sail booms, or other spare spars. This method was transmitted to Capt. Glascock by Capt. John Norman Campbell.

"In two instances, on board of forty-four gun frigates, I witnessed," says the writer, "the success of this expeditious plan. In the first, the main-yard went in two pieces, about ten feet from the slings. The accident occurred at eight, *a. m.*, and at six, *p. m.* on the same day, the main-yard was in its place, and the main-sail set.

* Capt. Glascock's Naval Manual (Page 115).

"In the second instance, the fore-yard was carried away, about the same distance from the centre, and was repaired and replaced in about the same interval of time.

"Both ships, for several weeks subsequently, had to contend with heavy gales and bad weather, yet the repaired yards stood as well as they did prior to the accident.

"To make a temporary lower-yard. When a lower-yard is entirely carried away at sea, it is not uncommon to make a yard with the spare spars supplied to the ship. This is frequently done by bringing two studding-sail booms end to end, which together makes up the length of the yard; then to scarf them by bringing the spare topsail and top-gallant yard in the middle, and other small spars, as top-gallant studding sail booms, &c., to make up the form of the yard. When the different spars are so placed as to overrun each other in the best possible way, they are then well woolded together, and the yard is formed.

"The rolling of the ship makes it frequently difficult to keep the spars together, till woolded, in which case it is better to lay any inferior pieces on the deck, as skids, and fix the lower ends guyed to the sides of the ship: by this means the different spars may be kept sufficiently steady to woold in a proper manner. Whatever part the wooldings are applied to, it is necessary to fit chocks between the spars to keep them firm, and for the woolding to lay fair over them, so as not to *wound* the spars."

Taking in foresail in blowing weather.

In carrying on sail, the topsails and foresail are generally the last sails taken in; the mainsail being in squally or unsettled blowing weather, considered by most good sailors as a dangerous sail in every way, but more particularly in case of being taken aback: this sail, from its central position, tends to

press the ship right astern, then comes the tenfold difficulty of hauling this sail up from its pressing in between and round the main rigging and topmast back-stays, but if the ship should be taken aback under topsails and foresail only, the foresail being so far forward would soon bring the ship round with the wind on the other beam, consequently out of danger—now to the subject of taking in a foresail. It blows very hard, you cast your eyes to windward and see nothing but the chance of the squall increasing. If you are not absolutely obliged to run the risk of carrying on through all, of course you will take the foresail in, at this doubtful moment observe the fore-yard-arms, more particularly the weather one, and you will find they will have rather a downward tendency, but watch while you are taking in the foresail and you will soon see the yard-arms, particularly the weather one, buckle up to that degree that it will make you extremely anxious for the safety of the yard. Many times I have had a perfect fright when the fore tack has been eased away in running up the weather gear, to see the weather yard-arm spring up as if nothing could possibly prevent its being carried away—in thinking on this subject it occurred to me how frequently you can carry a fore-topmast studding sail much longer by making a martingale of the lower studding sail halliards. Upon this principle I have tried a burton from the weather fore yard-arm to a ring bolt on the deck, or fast to the chains, directly under the fore yard and well boused taut as a martingale previous to taking in the foresail, and found it to answer beyond my expectations. I mention the fore yard for the reasons before stated, but of course it could be applied with equal good effect to the main yard.

Setting fore and aft sails.

In setting these sails the sheets should be hauled aft, previous to hoisting them. Should this precaution be neglected

in anything beyond a moderate breeze, you endanger the splitting of the sails: care should be taken to have a good hand by the sheet of any fore and aft sail while hoisting, as considerably before the sail is up the sheet will require easing gradually to admit of the sail running well up the stay; the sheet should be so belayed that the seaman attending it should himself be able to see when the sheet requires easing. Jib-booms have sometimes been carried away from the want of this precaution, the whole weight and jerk of the sail being thrown on the boom end while the sail is hoisting.

The same care and attention will be required to the sheets of fore and aft sails in taking them in, as in setting them.

Heaving to with the fore-topsail.

I have often been at a loss to find out a good reason for vessels of war not heaving to with the fore-topsail more than they do, certainly a vessel so hove to does not come up and fall off anything like what a vessel does hove to with her main-topsail. I have continually found Pilots most anxious to have the ship hove-to with the fore-topsail, and have frequently asked them their reasons for so doing, and have invariably received for answer that they were more sure of the position of the vessel—I know there are several cases in which it would not be so handy to heave to with the fore-topsail, still there are many in which it would be most useful to do so.

Furling the sails on the mizen-mast when right before the wind.

Many of our best officers when they are very anxious to make the most of a ship's way dead before the wind, furl the sails on the mizen-mast; as it is generally supposed that the sails on that mast prevent the wind from blowing direct into the main-topsail. There is very little doubt that when the

wind receives its first resistance from the sails on the mizen-mast, that it then glides off the leaches of the sails on that mast, without being near the same use to the sails on the main-mast; as if the sails on the mizen-mast were furled, the wind would then have much greater power from blowing directly into sails so much larger.

Fore and main-stays.

Having both fore and both main-stays of the same size, must be considered a great improvement on the old plan of having one so much smaller than the other, because if the larger stay were carried away, the smaller one was, on some occasions, not considered sufficient to support the mast, but now the two stays on each mast are of an equal size, and supposed to be sufficiently strong. In making the stays both of the same size, we have every reason to believe, that the fear of the larger one being shot away had more to do with the alteration, than accidents from wind or weather. Still it is no uncommon thing to see ships fitted out with both main-stays on the same line, and fore-stays sometimes nearly so, thereby endangering both stays being shot away with the same shot. To set a stay up on its own part, no doubt looks very neat, but to set it up with a laniard, is beyond controversy the quickest and most ready way. How often is the fore or main rigging detained in setting up for a considerable time, until the seizings are passed, when the stays are set up on their own parts.

Fishing from the ship.

Few officers like the appearance of fishing-lines hanging over the ship's sides, still, in many places where fish are very plentiful, and may be had at almost any time, by putting a line overboard,* in such cases, even in very strict

* It will be found most desirable, both as regards the health and recreation of the crew, to allow stated times for fishing.

ships, we have known the word passed for the men to get their fishing-lines up, as there was a good opportunity for fishing. In close harbours we have known the same officers, when the service would permit, give a boat for line-fishing, sending a man from each mess for that purpose. Line-fishing and seine fishing, now and then, make a little variety in the sameness of a sailor's life, besides giving him a good fresh meal. We have every reason to believe, that the fishing-lines are sometimes used for a very different purpose to what they were intended,—fishing lines come in rather too handy for pointing, grafting, cot-clews, &c.—these things ought not to have any weight when the health of the crew is taken into consideration. When on good ground for trawling, getting a good haul of fish with the trawl now and then, tends much to enliven the monotony of being at sea. The fishing-lines allowed to the officers and ship's company ought invariably to be applied for that purpose alone, and not left to be given out according to favour, &c.

Futtock-shrouds.

Since the futtock-shrouds have been secured to the lower masts, instead of to the lower shrouds, it has much simplified and quickened the setting up of both lower and topmast rigging, as the topmast and lower shrouds can now be set up on the same masts, independent of each other, whereas, when the futtock-shrouds are secured to the lower shrouds, it is always considered desirable to slack the topmast rigging previous to setting up the lower rigging. The futtock-shrouds being secured to the lower masts, make the topmasts and lower masts work more in unison with each other, than when they are secured to the lower rigging; the rigging being so much more pliable when the futtock-shrouds are secured to the shrouds; every change in the lower rigging, from very taut to very slack, must affect the topmast rigging, therefore occasions the

unnecessary working of the topmasts. I have frequently observed in carrying a press of sail by the wind, that the topmasts have not only been supported by the strain being carried by the futtock-shrouds and cat-harpings to the lee lower rigging, but the weather lower rigging has been shouldered up to such a degree, that I have been able to move by hand, each shroud between the futtock-staff and the mast-head, while the lower part has been as taut as a bar. We have every reason to believe, that securing the futtock-shrouds to the lower masts has saved many topmasts, and that the lower masts are not in the slightest degree injured by it (but on the contrary benefited), if the masts are properly prepared for the purpose. If chain or iron bars should be used instead of rope, for futtock-shrouds, great care should be taken that iron scotch-men are put on the lower rigging, in the way of the chafe of the iron futtock-shrouds. We mention this, because we have known rigging much chafed from neglecting to attend to this.

On the fore-yard not bracing up well.

When the fore-yard braces up with much difficulty, and continues to do so after the rigging has found its place, so much so, that the sails on the foremast do not set to the best advantage, it would be advisable to increase the angle of the fore-stay, by clothing the bowsprit a little farther out, so as to give the fore-yard more room for bracing up between the fore-rigging and fore-stay. Fore-yards are often crippled from the confined space in which they are braced up, so much so, that nearly the whole weight of the fore-stay is pressed on the weather-quarter of the yard, when a ship is pitching heavily, and as the weight of the fore-stay presses in direct opposition to the strain on the lee fore-brace, the whole combined strain of tautened weather fore-brace, all tends

to cripple the fore-yard where it binds against the lee rigging, in fact, as the yard has no spare space to work in while the ship is pitching heavily, something must go—the angle of the main-stays is generally so good, that no fears need be entertained on that subject.

Taking the Ground on a bold shore.

In this case the ship generally takes the ground forward, and in sounding round the ship you will find that you have plenty of water aft, therefore if you get on shore by the wind, you had better throw all flat-aback, and run guns, shot, or any other weight from forward aft to raise her bow, and the sails will force her off. If the ship should run aground with the wind aft, so that the sails cannot be useful in backing her off, they had better be furled immediately, and an anchor laid out to heave her off.

Firing bow guns when in chase.

It appears to me that the fear so often entertained of retarding the ship by firing bow guns in chase is much overrated, and that the hope of accelerating the ship's speed by firing stern-chasers is equally, if not more doubtful. But in both cases when the ship is large, and the breeze commanding, I cannot understand how a single gun fired at intervals can possibly retard or accelerate a ship's speed. Yet we have often seen the first of these points much canvassed when in chase, and sometimes when the ship was going nearly her full speed; but it was generally decided that the bow guns would most surely retard the ship. As these points appear to admit of a doubt, it would be a desirable thing to prove it in a practical point of view, by trying it with two vessels of equal force and as nearly equal speed as possible; and when right abeam of each other, let one fire her bow guns, and try its effect compared with the other, and then try the effect of the stern guns. As the same case theoretically may differ widely when tried practically, it would be well to give this subject a good trial. While on the subject of the effect of the bow and stern guns on large vessels, with the usual sized guns of this class, we think it cannot be doubted that small vessels, with very

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to cripple the fore-yard where it binds against the lee rigging, in fact, as the yard has no spare space to work in while the ship is pitching heavily, something must go—the angle of the main-stays is generally so good, that no fears need be entertained on that subject.

Taking the Ground on a bold shore.

In this case the ship generally takes the ground forward, and in sounding round the ship you will find that you have plenty of water aft, therefore if you get on shore by the wind, you had better throw all flat-aback, and run guns, shot, or any other weight from forward aft to raise her bow, and the sails will force her off. If the ship should run aground with the wind aft, so that the sails cannot be useful in backing her off, they had better be furled immediately, and an anchor laid out to heave her off.

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Head sails.

Head sails should always be well stopped in bending or unbending in blowing weather, or you endanger the lives of the men, and sometimes the spars.

Floating hawsers.

It has often occurred to me, that floating hawsers would be of great use in the Navy; for in laying out rope hawsers, you seldom get above half their length in deep water, even with several boats ahead, and it is nearly as bad in shoal water, to drag the hawser over the ground. At the Isle of France, and many other places, they formerly used nothing but floating hawsers to warp the vessels in and out of port. I believe they are mostly made of coir, which is very light. At the Isle of France, I have frequently seen nearly a mile in length of this kind of hawser, floating beautifully on the top of the water.

On heaving-to with the ship's head in shore.

The best seamen admit, that a vessel should never be hove-to with her head in shore, at night, excepting from unavoidable circumstances; still, strange as this may appear, many vessels are lost for the want of this proper precaution. I could name several vessels that have been lost, wholly owing to this objectionable practice. It has sometimes happened, that, though a vessel has been hove-to with her head off shore, still, from the want of attention to the compass, and the change of the wind occasioned by the influence of the land, &c., that vessels have come up on the same tack, so as to endanger their going on shore. We have heard of two instances of vessels, which were hove-to in deep bays with their heads off shore, both of which were nearly lost, from drawing in with the land, on the same tack.

Hailing aloft in blowing weather.

In gales of wind, or when blowing hard, the voice of the commanding officer can seldom be heard so high as the tops, and continual hailing without being understood only creates confusion aloft, and impedes the duty. In such cases, have two or three smart intelligent sailor boys stationed near the commanding officer to convey his orders aloft, this will save much misunderstanding, hailing, and confusion. We have seen this tried for several years, and to say the least of it, it makes a ship much more orderly and quiet. A few middies should be in attendance, to convey orders to and from the different officers on duty.

On accidents to the helm.

Should the tiller break, the rudder should immediately be chocked, and the ship hove-to, until the tiller is replaced. As in all vessels of war there is a place for shipping the spare tiller on the deck above, it would be better at once to ship the spare tiller on that deck, and not to lose time in getting out the stump of the broken tiller. The spare tiller being always kept on the main-deck, proves how much the general opinion is in favour of steering the ship on the main-deck, until you have fine weather to ship it in its proper place. Whatever serious accident may happen to the helm, it will be advisable to heave the ship to as soon as possible, as these accidents to the helm are most likely to take place in blowing weather. If scudding, it will require the most skilful management of the sails to bring the ship gradually to the wind, for, if you broach-to suddenly, you are in danger of losing your masts, and stand a chance of a clean sweep of the sea: but once hove-to the ship will be more easy than in any other position. As ships are now generally supplied with the material for

making a spare rudder, much of the facility for making and shipping it will depend on the ship being well hove-to. It has often occurred to me, that a sea-anchor might be used with great advantage while shipping a new rudder, from the men being enabled to work more securely over the stern; and if the ship were found to pitch too much from lying head to wind, some head-sails flat aback, or a spring on the cable from the stern, would easily place her in a more favorable position.

Hatchway covers.

If the hatchway covers are not attached to good strong rollers, and battens put up over head to keep them on, they will be used for all sorts of purposes, and when really wanted to keep the ship dry in heavy rainy weather, or to batten the hatches in gales of wind, &c., they will generally be found quite unserviceable.

In vessels where the hatchway covers are not on rollers, they are invariably used for every dirty thing that is done in the vessel; still, in a ship where these covers are only used for the purpose for which they were intended, if there is any difference in the cleanliness of the two vessels, it will be generally in favour of the vessel where every thing is applied to its proper use.

Hooks used for the chain cables.

Many accidents having happened from the chain-hooks being carelessly left in the tiers on the chain-cables; for instance, if an anchor should be let go, or cable veered in great haste, the hooks attach themselves to the cable and fly about in all directions while the cable is running out. We have heard of several accidents from this cause, and seen a few ourselves; a proper place should always be appropriated for the

chain-cable hooks, or otherwise they will generally be thrown into the tiers, which will make you continually liable to accident whenever the cable runs out quickly.

Hove-to.

The term hove-to we think should be applied when a vessel is really so placed with some sail aback; for instance, a square rigged vessel with one of her topsails aback, or a fore and aft vessel with one of her sheets hauled to windward. Instead of which, if a vessel have only her main-top sail set when blowing hard, and steering by the wind, you will generally see the number of hours she has been so, marked in the log as hove-to, and the same when keeping to the wind in gales under storm fore and aft sails. We have often been at a loss to understand why a vessel lying by the wind, and perhaps making nearly two or three miles an hour should be called hove-to; still, sails aback, or not, this term is indiscriminately used whenever a vessel is under low sail by the wind in blowing weather. We think when it blows so hard, that a vessel cannot steer her course, but is brought to the wind under low sail, that she ought then to be called lying by the wind, and not hove-to: the term hove-to we think would be better applied when a sail or sails are aback. It appears strange that two things so widely different as that of stopping a ship by backing a sail, and that of keeping her to the wind in blowing weather, should so long have continued to have the same term. We have not met with any Naval work in which the same term is not used indiscriminately for both purposes; still we know well, that most of our best seamen consider it wrong to make use of the term "hove-to" unless with a sail aback; and when a vessel is doing her best to keep her wind under storm sails, &c., the same seamen make use of the term lying by the wind.

Heaving the lead in shoal water.

Most officers admire the fine seaman-like song which is usually given by the leadsman in the chains while giving the soundings; and as Jack prides himself very much on his song while heaving the lead, it would be a pity to curtail that pride in the slightest degree, while the ship has plenty of water under her keel; but when the ship gets into shoal water, there should be no song in heaving the lead, as there can be little doubt but many ships have bumped, in order to make the hauling-in of the lead-line tally with Jack's song. It must therefore be very desirable that when a ship gets into shoal water, that the man in the chains should simply call out the number of fathoms, half-fathoms, quarter-fathoms, or feet. By doing this, the lead is hove much quicker, and the attention of the leadsman is wholly taken up with the soundings, instead of having his attention divided between the soundings and the song.

On the heads of ships of the line being raised.

By which, I mean that part of the head of the ship which is appropriated for the accommodation of their crews. Raising the heads of ships of the line must be considered an alteration of the greatest utility, in whichever way it is viewed. It gives more clear guns to fire ahead, the head is placed in much greater safety in blowing weather, and much drier for the accommodation of the ship's company on such occasions. But as most alterations, however good, will involve some drawback, so has raising the heads of ships of the line; for since the alteration has taken place, I am much inclined to think the dirty habit of making water about the decks at night has much increased, more particularly in the extreme cold weather during the winter. Previous to raising the heads of ships of the line, the men went there under cover along the main-deck, but since

the alteration of the head, they are obliged to go over the forecastle, therefore from their warm hammocks exposed to the inclemency of a winter's night. I may be told that the crews of frigates are in the same position. In a measure I admit it, but not to the same extent. See the distance the crew of a three-decked ship have to go to the head; and then take into consideration their difference in numbers. We all know that during a long winter's night most of the crew will require some relief of this kind, therefore it would be well to bear in mind the number of men that are exposed to the liability of cold by wetting, checked perspiration, &c. I am no advocate for nursing sailors; still I think it of the utmost importance their health should be attended to. I have long entertained an opinion, if ships of the line had some place of accommodation for the crew to make use of at night during the winter season, that it would add much to the health of the crew, and do much to eradicate the dirty habit mentioned above. Besides the increased distance, most of the men have to go for this purpose in ships of the line, detection becomes doubly difficult in those ships, from the manger being on the lower deck, and the guns affording so many screens for this purpose, &c. On the orlop deck, wing gratings, cable tiers, hawser tiers, and other tiers for tackles of different kinds. Even in 1815 (before the heads of ships were altered) when I was a midshipman of a ship of the line, and she was considered to be in good order, still well do I recollect that the quarter-masters, &c., who slept in the tiers, had what they pleased to call wash-hand kids, but in reality they were used for a very different purpose. From what I have heard and seen myself, I am strongly impressed with an idea that this dirty habit is more common in ships of the line than decency will induce officers to admit. I have been told by very good authority, that in the present days of mild discipline, some of the lazy ones will often balance a cold walk to the head, and the chance of a wet jacket, against detection and the chance

of punishment. If a place of the kind were fitted in three-deck ships on the middle deck, well forward, and only to be used under the restrictions before mentioned, and at all other times to be locked up, and to be so neatly let into the ship's side that it could not be well discovered excepting when used; this place with a lantern at night, would go far to diminish dirty habits, and decrease punishment. For a two-deck ship it ought to be in the most convenient place on the main-deck. Most ships in going round Cape Horn, are obliged to have some contrivance of this kind for the ship's company.

On extreme heeling a ship.

If your ship has received so much damage in her bottom that extreme heeling becomes requisite, do not risk heeling her too far with dead weight inside, but with boats, casks, anchors, &c., slung outside, on the lee side; the boats' falls perfectly clear for lowering, and the ropes of the other weights with hands by them, ready to let go or cut immediately. The tackle-falls of the lee guns should be led to windward. The sinking of the *Royal George** was occasioned by the want of some precaution of this kind; for when the alarm was given, the crew all ran to leeward to get the weather guns over to windward, and run the lee guns in, and remove shot and all dead weights to the weather side. This movement of the crew to leeward in order to right the ship, appears to have been the very cause of expediting her loss, as the weights there already were too great, and no hopes of removing them but by the crew going to leeward for that purpose. Had the *Royal George* been assisted in heeling by weights from the outside, kept ready to let go on the alarm of the ship taking in water, or settling, she would have had a much better chance of being saved. Extreme heeling never should be had recourse to, if

* In ships of the line the lee lower-deck ports should be barred in previous to extreme heeling.

possible, when a dock can be obtained. Before heeling a ship to any extent, if the sails are loosed, they should be furled, and kept so while the ship is under that operation. The rear of the lee guns should be kept clear for running them in, if required, in haste. As sometimes a small anchor may be necessary to lay the ship in a position to prevent the ripple, or wave washing against the workmen, one had better be kept ready. I was in a frigate in an open roadstead, when we nailed on several sheets of copper that were nearly off, and very low down on the ship's bottom.

Hauling all the yards together in tacking.

This mode of tacking under any circumstances when desirable to gain ground to windward, cannot be considered a good one, as the ship must at least have the wind four and a half, or five points on the opposite bow, before all the yards can be hauled together. In this position the sails on the main and mizen-mast must have been acting against the ship from the time the main-yard could have been properly hauled, consequently the sails on these masts must have retarded the ship in tacking. The evolution of tacking by hauling all the yards together is a very pretty one, and should very often be practised, as the same stations are most useful when obliged to throw all aback in dangerous situations. The practice of reefing topsails while tacking, in this manner, ought not to be attempted except in very moderate weather, as the sails are then in the worst possible position for reefing.

Taut weather helm.

If a ship has so much after-sail set as to oblige her to carry a taut weather helm, she will mostly be more impeded than accelerated, by that quantity of after-sail, which is above what is required to counterbalance the ship, with a moderate quantity of weather helm.

On clearing hawse in blowing weather.

In clearing hawse in blowing weather, from weather, tide, and various other circumstances, it will be advisable not to trust to the lashing of the cables alone, but shackle the stream chain-cable round the clearing-cable below the turns in the hawse; when you have hove your stream-cable well taut, commence to clear hawse as usual. Even in moderate weather, I have known very good seamen that would never clear hawse without having a bolt through one of the links of the riding-cable, to prevent the turns of the hawse-lashing from slipping down the cable.

Hawsers.

When a vessel comes home to be paid off, after having been her usual time on a foreign station, her hawsers are seldom in a trustworthy state for sending her heavy spars on deck, and as many accidents have occurred from vessels using the same hawsers which they have had in use for three years or more, with the probability of their having been frequently wet, badly dried, or even sometimes reeled up to be out of the way, before being thoroughly dried, it would always be more prudent in such cases, to draw a new hawser from the dock-yard; and if this hawser is only used for this purpose, and immediately afterwards returned into store, it will only be well stretched, and better fitted for use, when supplied to another ship. Considering how much of the safety and efficiency of a man-of-war depends upon the good condition of her hawsers, too much care and attention cannot be bestowed upon their preservation.

Hauling up or lowering down things over a ship's side.

This practice is very Privateer-like, and soon destroys the steps and paint on the ship's sides, besides giving a slovenly

habit to the ship's company. In going up the side of a ship where this careless practice has been allowed, though discontinued for some time, you may detect it immediately by the chipped steps and marks of rope on the landing. A whip should invariably be used for everything which cannot be handed up the ship's side, and taken off as soon as done with; still there are many times when a whip should be left on the main-yard during all meal times, as those are the only opportunities which a ship's company can have for supplying their wants when a ship is approaching her time for sailing. When this is done, the crew will always prefer using a whip; but when they know that one or two main-topmen must be called from their dinners to get a whip on the main-yard, they often chance detection rather than ask the officer of the watch to have one put on the yard. How often, a few days before sailing for a foreign station, have we seen boats laden with sacks of potatoes, &c., ready to come alongside the moment dinner, breakfast, or supper, was piped. If you wish to cure an evil, it is but justice to give the remedy.

Idlers.

There are few people so misnamed as that body of men denominated "Idlers" on board ships of war; in fact, the idlers in many cases are those who do the most duty on board. Officers cannot guard too much against the indiscriminate calling of the idlers on deck on every trifling occasion; so much of the comfort of every one on board depends on the idlers, that they ought not to be turned up without due consideration. We will suppose a case:—the idlers are turned up at about six bells in the forenoon, or perhaps earlier, and kept on deck until a few minutes before 12 o'clock; will the midshipmen, warrant officers, &c. have their dinner ready at the usual time, if the master-at-arms has done his duty? I answer "No;" and perhaps just at the moment you are about to give the order to pipe to dinner, you see the ship's cook coming aft to say, he is sorry the ship's company's dinner is not quite ready, as his mate has been on deck for some time, and in consequence, from the want of assistance, with hard wood to chop, and many other excuses, the dinner is not quite ready. In the wardroom, &c., "Steward, why is luncheon not on the table?" "The boys have been on deck so much during the forenoon, that the knives are not cleaned." Whenever the idlers are much turned up in any ship, her internal regulations must suffer materially. Store-rooms of every kind cannot be so neatly kept when the yeomen are continually called on deck; neither can the people in charge of these places be expected to take the same pride in them. The armourers, carpenters, sailmakers, &c., lose much of their precious time from being called up with the idlers, sometimes for the greatest trifles. In some ships, the officer of the watch has the power given him to turn the idlers up when he may think it requisite, and still to carry on the duty himself with the idlers. This does not appear to be desirable, as the idlers are in this way much

oftener turned up, and when up, kept much longer on deck; but when the idlers cannot be on deck, without the commander in ships of the line, or senior lieutenants in all other ships, these officers then feel the responsibility of having the idlers on deck at the expense of all the work of the artificers, and the general discomfiture in every department when these people are turned up at improper times. Of course all officers know well enough that everything must give way when the service requires it; but all that I wish to observe is, that the duty of the ship, and the comfort of the officers and men, are often interfered with from the indiscriminate turning up of the idlers on every trivial occasion. Any one who has paid attention to the arrangement of a vessel of war, may have noticed that when the idlers are much kept on deck during the morning watches, more particularly towards the end of it, that the internal arrangements of the ship are much retarded; and those idlers who have to prepare breakfast for their masters, seldom have it ready until the calling of the watch, when they are obliged to go on deck often without having had any breakfast; and the officers generally feel it in the way of dirty shoes and unbrushed coats, &c. It would be well to bear in mind that though the idlers may be required on deck, still those who have dinner and breakfast to cook, may often be spared; and though last not least, those who get their spirits raw from the tub often lose it from the want of attendance to its being served out at seven bells; this is worse than all to those who would rather go without dinner, or anything, than their grog. Many ships have a list of the idlers, and a separate list of the working idlers; this is a very good arrangement, and may be so managed as not to leave any department quite unattended to in large ships; but in smaller ones much must depend on the judgment of the officer carrying on the duty, as perhaps the idlers may not admit of duplicates, therefore, in that case, the officer should bear in mind that if he does

not recollect certain things, that certain people must go without dinner, breakfast, or grog, as the case may be.

On the action of the Jib.

As the action of a sail is perpendicular to its surface, the jib must be a rising sail; therefore, when not carried too long for its extreme position, it must rather tend to prevent pitching than otherwise.

To take in a jib when blowing fresh.

If you are by the wind, and can afford to keep the ship off the wind two or three points while taking in this sail, it will be a great relief to the jib, jib-boom, and the men while stowing it; if the men are on the bowsprit, and everything quite ready, it ought not to take above two or three minutes before the ship could be hauled to the wind again.

Junk-axes and handy-billies.

These axes, if not attended to, are generally used for a very different purpose to what they were supplied for. All the junk-axes and handy-billies ought to be well sharpened, kept in good order, and arranged in beckets on the upper deck, ready for use at a moment's notice.

Triangular cross-jack.

It has often occurred to me, that a triangular cross-jack would be useful in action, in case anything should happen to the mizen-topsail or driver. The base of the triangle should be bent to the cross-jack yard, and the lower angle hauled down just above the man at the wheel, when set, and from having no tacks, or sheets, it would not be in the way of the guns, but might be worked with the cross-jack braces with the greatest ease, and without any inconvenience to the men at the quarter-deck guns.

Depth of Keel.

I have continually heard it asserted that depth of keel makes a vessel stand up better under her canvass close hauled; but I have long formed a different opinion: for instance, let a vessel have little or no keel, and you will find she makes considerable leeway, but add to her keel the depth usually given to vessels of her size, and she then becomes weatherly, making little or no leeway. The good effect of deepening her keel has then been to make her more weatherly, not to make her stand up better under her canvass. I am strongly inclined to think it has the contrary effect, for the keel in resisting the leeward pressure of the ship, acts nearly in direct opposition to the force of the sails, which certainly cannot assist her in standing up better under her canvass. Depth of keel has been found very useful in lessening rolling motion; we may therefore suppose that bilge pieces will still farther decrease the rolling motion.

Kites for communicating with the shore.

It appears to me that kites made of duck or very light canvass might be used with great advantage for communica-

ting with the shore, when the wind is blowing too hard on the land for communication by boats. There are many ways in which it could be done, but I will merely mention one; let the kite be about six feet high, and everything about it in proportion to its height, except the tail, which would be required to have its length and weight in proportion to the small line, with a piece of wood attached to it, made in the shape of a small model boat with head and stern alike; this small line that it may be known, I will call a buoy-rope. The upper part of the buoy-rope should be made fast to the lower part of the bridle or span to which the kite-rope is attached. The buoy-rope should be sufficiently long to admit the people to get hold of it on the beach, and the tail of the kite should be powerful enough to keep the kite in its proper position, at the same time carrying the buoy-rope and its little float safe on shore. I have every reason to believe, that this manner of using a kite might be made useful on several occasions.

Upon the manner of kedging in the river Ganges, Bengal.

*"In the river Ganges, where the tide is extremely strong, the pilots drift the largest vessels with a bower-anchor down. For this purpose, the cable is hove-in short, and bitted; then, to the cable before the bitts, is lashed one eye of the messenger, that the cable may be hove-in at pleasure. Thus prepared, let the cable be shortened in till the ship drives at such a rate as to regulate her steerage, which rate may be preserved by heaving in, or veering away cable. But this mode of drifting is carried to a greater extent, when it is required to drift a ship a considerable distance obliquely to the stream. The cable being prepared as before, let two springs be fixed to the anchor coming in upon each quarter; then, by veering away

* Gower, page 55.

cable, and holding on the spring on either side, the vessel may then be drifted in the direction required, and her drift will be increased in proportion as her broadside is opposed to the tide."

In considering the subject of drifting vessels in the river Ganges, it appears to me, that this method of using a bower-anchor on such occasions might often be applied with great benefit to vessels obliged to anchor with a strong wind and tide the same way, &c. The first anchor being dropped with only sufficient cable to allow it to trail on the ground, would, in some degree, check the ship's drift, and give a much better chance of bringing her up smoothly with the second anchor, or veering both cables together when her drift had been checked, or even where plenty of room to check her by degrees with the first anchor, and veer afterwards. As the ship would have steerage way, attention should be paid to keeping the second anchor well clear of the first.

Light-houses.

It has often occurred to me, from the number of vessels either wrecked, run on shore, or otherwise endangered by mistaking one light-house for another, that it would be a beneficial thing, if some plan could be devised, so that each light-house could make its number, or name, to any vessel so endangered. When a vessel fires a gun, or throws up a rocket, which would indicate her wish to know the number, or name of the light-house, the latter could then make its number or name. As ships of war make night signals by lights, horizontal, vertical, or triangular, large transparent letters, or numbers might be so placed as to indicate the letter, or number of the light house, by which you could be informed of its name; it might be thought advisable only to use these precautions on a dangerous coast. I merely submit this as a thing very much wanted, in hopes that it may meet with some person able and willing to improve on it, for the sake of our great naval and mercantile marine, which are so often endangered for want of something of this description. If the captain of a vessel thus saw a light he was doubtful about, he would only have to make his signal, and when answered, he would be able to run his ship with the greatest certainty, the light-houses being named or numbered on the chart of the coast or place.

Look-out men aloft.

Men should be placed to look out on the topsail-yards as little as possible; nine times out of ten when men are so placed they hold on by the topsail-tye instead of the tye-block which they generally find too large to grasp. How often have the topsail-halliards a pull taken of them, or settled, without the man on the topsail-yard having the slightest notice of what they are doing on deck, until unfortunately he feels his fingers in the tye-block, the poor fellow then soon lets you know the

mischief you have done by his cries. If he get his fingers in the block in settling the halliards, you will require an immediate pull on the halliards, but should it be in hoisting, you will require to settle the halliards quickly, at the same time send men aloft to sling and send the wounded man on deck. Many officers only admit of one case in which a man should be allowed to look out on a topsail yard, and that one is when you are carrying double-reefed topsails, and top-gallant sails, and blowing too hard to trust a man on the top-gallant yard; but should officers of a different opinion think it right for men to be so placed to look out, it would always be advisable to give the man some warning, or call him off the yard previous to hoisting, or settling the top-sail halliards. Men have often lost their fingers for want of this timely warning.

Luffing to the wind in square rigged vessels in squally weather.

This practice I have known advocated by very good seamen, but my experience has led me to think it not a good one, more particularly when you have plenty of sea-room to admit of the ship being kept off the wind during the heavy part of the squalls; by doing this you decrease the strain on all your ropes and sails, and thereby add much to their safety; but by the other method you increase the strain on all your ropes and sails, until the sails are shaken by the wind, and then they are in a still worse position, for the sudden jerk which both ropes and sails receive at that time is more injurious than a much heavier steady strain. Of course much must be left to circumstances, and the judgment of the officer, but the best seamen do not advocate bringing the wind abeam during the height of a squall before canvass is reduced, more particularly after-canvass, as a beam wind in heavy squalls is one of great danger to the ship, sails, and spars; therefore, to get the wind

abaft the beam as soon as possible, when circumstances will admit, is most certainly the greatest point of safety for a square rigged vessel. In going in or out of narrow harbours, surrounded with high land, you are frequently obliged to have recourse to luffing the ship until the wind is out of the sails, for in these situations you have continual shifting flaws of wind, and though your sails are shaking for a short time, you feel nearly certain that the next flaw will be either on the weather-beam or quarter; and in this way, by keeping her sails shaking to the flaws that are against her, and taking advantage of the favorable flaws, you at last get in, or out of port, taking care to have good hands by the anchor, and everything clear for shortening sail, if required. I have often gone in and out of the Havanna in this manner, the wind being generally on the Mora Castle side of the harbour in the day time.

Securing lower yards.

In hoisting in, or out heavy weights by the lower yards, the more you consider them merely as outriggers, the better you will insure their safety. In whatever manner you guy your purchases out to the yard-arms, whether by blocks, thimbles, or lashings, be careful that the purchase pendants render well through them. The yards should be well topped up, good rolling tackles on the opposite side, and trusses well taut after the yards are laid; but should the yards be required for a continuance as the main yard is in hoisting in, or out heavy guns, the pendant should then go over the lower cap and down on the opposite side of the deck, and there well lashed to the top tackle bolt. The yard and masts should be covered with old hammocks, or canvass sufficiently for cross-lashing the main-yard to the mast after it is topped up. It would be still advisable to have a good rolling, or yard tackle, on the opposite side to the purchase.

Lee helm.

In boat-sailing with light winds, when the boat is inclined to carry lee helm, how often this is rectified by the men sitting a little farther forward to increase the immersion of the bow, and sufficient to leeward just to list the sails; this increased immersion forward, and increase list to leeward increases the resistance to the water on the lee bow, diminishes it on the weather, and consequently improves the weather helm: this might equally well be carried out in ships by merely running a gun, or two forward, and one, or two in on the weather side. We have every reason to believe that a ship taking this precaution will have a great advantage over the one that omits to do so, in light winds when in chase, &c. In the heeled position, even the flapping of the sails would seem to have more effect on the ship.

Luff-tackles.

It would be well if every ship when at sea, had a sufficient quantity of luff-tackles always rove to set up all the rigging fore and aft on one side, at the same time, as ships are often placed in a situation to require this being done to save their masts, and this may frequently occur without the least blame being attached to any one,—from sailing with new rigging, or from running from a cold climate to a warmer one, rigging settling down after carrying sail in a strong breeze, &c. These tackles are required for so many purposes when setting up rigging generally, that I have mostly seen a scarcity of them on such occasions.

Leadsmen in the chains prepared for action in shoal water.

As the lead, or leads must be kept going while chasing in shoal water, it should be borne in mind, that where the

breast-ropes are fixed for the men to heave the leads from, that a gun on each side of the quarter-deck is generally opposite, and almost touching each man's back. Now should the order be given to prime the guns, it would most certainly be desirable that these guns should not be primed, but the vents well stopped. If these guns are allowed to be primed, the leadsmen are placed in the greatest danger from the numberless ropes continually working about the guns, cross-jack braces, &c.

On leaks occasioned by the sun in tropical climates.

Vessels are often obliged to anchor, or moor, so that the greatest heat of the sun strikes the ship on one side, or nearly in the same place every day. When this happens, the side, or part of the ship ought to be shaded, but should this not have been done, the place should be well examined previous to going to sea. I have heard of several vessels becoming very leaky from not attending to this before leaving port. In tropical climates the sun has such power from constantly striking in the same place, that the pitch is soon melted out of the seams, the oakum becomes dry and rotten, or, at any rate of little or no use in keeping out the water in a sea way, and it will not take many weeks before a well caulked and tight ship becomes a leaky one, if she is not shaded, or caulked after having been exposed to the continual heat of a tropical sun for any length of time. I was in a ship that became very leaky from this circumstance. We had been moored head and stern at the Isle of France, according to the custom of that place, for two months, and the first fresh or strong breeze we had after going to sea, the ship made so much water, that by putting your ear to the ship's side, you could hear the water pouring in through the seams. It never struck any one on board, previous to the ship becoming leaky, that the sun

could have so much power on a newly caulked ship in so short a time. This happened in a ship with a most attentive and good carpenter. Nothing can be more particular than ships of war are in shading their decks—but their sides are seldom shaded. Merchant vessels, from the liability to damage their cargoes, are obliged to be very particular in shading and examining their sides frequently. Many merchant vessels at sea, when the sun has been for any length of time on one side or part of the ship, such as in running down the Trades, &c., caulk that part previous to getting into variable winds.

First lieutenant.

Many anxiously zealous officers, when senior lieutenants, do most of the executive duties of the ship themselves, but this cannot be considered a good plan for the service, because those ships are known to be in the best order where every officer is obliged to do his own duty strictly, and the more this is attended to, the more systematic, more orderly, and more efficient a ship will become: the larger a ship is the more absolutely requisite it will be that this point should be carefully attended to, as one officer, however, smart and zealous he may be, can not follow up all the detail duties of a ship (more especially a large one), so well as if each officer in the ship were obliged to take upon himself his own part of the duty, and its responsibilities. As a ship increases in size and number of men, it becomes more imperative that each officer zealously perform the duties of his station, as specified in the Printed Instructions.

On the better lighting of the lower deck of ships of the line.

I have been informed that many French ships of war have one or more large lanterns on the lower deck, with reflectors sufficiently strong to throw the light all over that deck. I

am strongly of opinion, if a similar plan were adopted in our large ships generally, it would have the best possible effect in preventing crime of every sort. Many things are done under the cover of a dark lower-deck, such as robberies, skulking, and every kind of breach of discipline, good order, &c., that never would have been attempted had the lower deck been lighted up as here proposed. If the hands are turned up in the night, every man sees what he is about, and where he is going. It would be of still greater advantage for night quarters, as not only the hammocks would have a greater chance of being stowed much quicker, and the men at the lower battery would see what they are doing, while the fighting lanterns were being lighted. These lanterns would have the effect of keeping the lower deck more orderly throughout the night, as it would increase the chance of detection ten-fold; and I believe it is generally admitted that the more certain the detection, the more you diminish crime, or disorderly conduct. What is the case in most of our large ships at the present day when the hands are turned up at night, which is seldom done but in the greatest emergency? Why you will see about half-a-dozen dips in lanterns, which only serve to render "darkness visible." Most officers that remember the late Lord Yarborough's yacht *Falcon*, can bear testimony to the admirable manner of lighting her lower deck by two large lanterns.

Leave.

This is a subject of the greatest importance whether viewed with respect to the feelings of the seamen, or the good of the service. I believe it is generally admitted, the practice of withholding leave from the seamen in ships of war has had a prejudicial effect on both the seamen, and the service, still officers in command generally are most anxious to give the crews leave to the fullest extent whenever time and place will permit it, but at present there are still many things which go far to discou-

rage officers in giving as much leave as they would wish, such as selling their clothes, drunkenness, breaking their leave &c., but no doubt these habits will rectify themselves in proportion to the quantity of well-regulated leave given. If you have not had an opportunity of giving leave for some time, and on first giving a watch, or a large number of men leave to go on shore, you must not be discouraged if a great number of men have lost or sold their clothes, others return drunk, and many break their leave, but let not this discourage you from letting the other watch go on shore as their opposite numbers return, or in any other way you may think proper. You may not have much better success with this watch than the former, but if you use means to prevent the recurrence taking place by stopping the leave of those who have stayed over their time (and as the drunkards will generally be those who have lost or sold their clothes) you may safely stop their leave, and their monthly money, until it amounts to the price of the clothes they have lost, thus punishing the guilty alone. If the ship lie long enough in port to continue to give leave, the crew will soon find out that there is no piping to dinner or grog on shore, and that those who will smile upon them while they have money, will soon shew them the way to the door the moment it is all gone. Sailors are much like the generality of the world, keep a thing from them, and they will be most anxious to obtain it; but let them have it to the full extent, and they will soon care little or nothing about it. In fact, I have seen giving leave carried to such an extent, that the men could not be induced to go on shore. Let sailors have their full run, get their pockets emptied, and after that comes the cold shoulder; then they soon find there is nothing like the good meals and snug hammocks they have on board a ship of war. A real sailor is a fine fellow, and if you make a point of giving him leave on every possible occasion, he will seldom take full advantage of it; but deprive him of the

liberty of going on shore, and he will most surely make a grievance of it to the fullest extent. All ships while fitting out, give their crews as much leave as possible; and generally speaking, the men are very punctual in returning at the time appointed; but there will always be some hangers-on, more or less, about a ship fitting out, who never intend to go to sea in the ship, their only object being to walk off with the Government bed and blankets, or whatever slops they can get with the addition of a few robberies from the ship's company. These characters are not very uncommon; they are mostly half-and-half sailor-looking fellows, and very generally say they have been brought up in the merchant service, but unfortunately they were wrecked last voyage, or some such excuse. In the merchant service these men are known by the name of Gravesend Voyagers. These vagabonds go about from port to port, where they think they are least known. Almost every man-of-war suffers more or less from such vagabonds, more particularly at the ports to the eastward. It is such fellows as these that generally make the show on the list of deserters and theft, while fitting out; with the exception of these men, and a few which they perhaps corrupt, nothing can possibly go on better than the leave does in most ships while fitting out. By giving leave to the utmost extent to those who conduct themselves well and return punctually to their leave, and putting an wholesome restraint on those who transgress, you hold out a strong inducement to good conduct, which is always sure to work well after a little time. In fitting out more especially, do not stop a man's leave for any length of time, as on these occasions many of the crew will have either relations or friends near at hand, which will make them feel one turn of leave being stopped, as much as they would two or three out of England. And if you stop a man's leave so as to take away all chance of his going on shore again while the ship is fitting out, it

may go far towards inducing him to remain until he receives his two months' advance, and then seize the first opportunity to cut and run. The management of leave to the ship's company has much to do with the manning and order of a ship, so much so, that it should not be left so much in the hands of the master-at-arms as it usually is. The liberty-list, if well attended to, gives the commanding officer an increase of power for the management of the ship's company. If the commanding officer make a point of seeing the liberty-men previously to their going on shore, it will ensure their neat appearance; and if on their return from leave they know they will be inspected by the commanding officer, it will go far to ensure their coming off without loss of clothes, sober and orderly. Short leave is not desirable, excepting while fitting out, when you generally allow as many men as possible to go on shore every day as soon as the work is done, and return in the morning by working hours. When men from unavoidable circumstances have been long confined on board ship, it will be desirable to increase the liberty-list as much as you can, and extend the period of leave as much as circumstances will possibly admit. The more you prolong their time of leave, the less drunkenness and leave-breaking you will have; and generally speaking, the less inclination the men will feel to continue going on shore so often. When men have frequent access to the shore, the novelty soon wears off, and they become more attached to the ship as a home. It is the confined bird-cage-like space which seamen are obliged to live in, which in a measure creates that excitement and uncontrollable spirit when they first go on shore, after having been for any length of time without leave; and as all ships must have their long passages, or long cruises, more or less monotonous, you must not be discouraged if they do commit a few excesses at first, but these excesses will diminish every day. Most officers may have remarked, that if you go into

port with a heavy sick list, the moment you commence to give leave, the sick list begins to diminish; but if you do not give leave on shore, the sick list will even sometimes increase. Giving a large amount of straggling money only induces a parcel of land-sharks to make the seamen drunk, and keep them so as much as possible, until their descriptions are sent on shore, with the amount of straggling money, and, if worth their while, they seize upon the men and obtain the reward. Men who have not the slightest intention of deserting are often entrapped in this manner. Whenever men can be spared, it must have a good effect on themselves and the Service, to allow them to go on shore and enjoy themselves with their wives and families, relations or friends, as often as the Service will permit, and I hold, that in doing so, you will raise both the character of the men and the Service. The oftener seamen go on shore, the more reason they will have to feel satisfied with their own situation. Few of the working classes are as well fed, clothed, and lodged, or taken care of in every way, as the seamen in Her Majesty's Navy. Give them every opportunity of judging between themselves and the people of their own class of life, and I will be bound to say, that generally speaking, they have not only the best of it, but they feel it to be so.

Striking lower yards.

When ships are anchored in a roadstead, and blowing weather comes on, if room for a chance of working the ship off shore under the courses, the best seamen are of opinion that the lower yards should not be struck, but the topmasts only, and they well secured with good strong heel lashings, and the back-stays set up well taut for carrying the close reefed topsails and reefed courses: when done, point the yards to the wind, and have everything quite ready for making sail, if the ship should part her cable, or cables.

Lanterns and candles, issuing to the petty officers, for the various duties during their night watches.

These lanterns and candles are usually issued to the petty officers at any time during the dog-watches, that the purser's steward's room may be open; this practice is often liable to much squabbling between the petty officers and the purser's steward, and also between the petty officers themselves, about their turns to go for them, where they have been left, losing candles, or broken lanterns, and gives rise to much more noise, than if this particular duty were deputed to one person, who should be held responsible for its being duly performed. In some ships the above is obviated in the following manner. A place under the aft deck, close to the sentry at the cabin door, is appropriated for the purpose of hanging up the lanterns to be used for night duties, each lantern, and the place appointed for it, being marked according to the part of the ship for which it is intended to be used. The purser's steward being made answerable for these lanterns being hung up in the evening and taken down in the morning—this gives a decided place for the petty officers to take the lanterns from at the first approach of night, instead of asking each other where they are to be found, at the very time they are wanted; and it often proves, that when they are required, they have never been taken from the purser's steward's room: this occasions an application to the quarter-deck for the keys of the purser's steward's room, out of which generally arises an inquiry, on which recriminations are passed from one to the other, which tend to much dissension. As the petty officers take their lanterns in the evening, so they replace them at day-light in the morning; and should they not want the lanterns at any time during the night, the sentry should have orders to allow them to be hung up in their proper places during that time. When this is properly attended to, it saves many complaints,

the petty officers are spared much annoyance, and the lanterns are much better taken care of. To insure the lanterns being good, well kept clean, and always in good order, they should be hung up some time previous to sunset, so that they may be in view of the captain and senior lieutenant. I have seen this tried for several years with the addition of a smoking lantern and dancing lanterns, and found it to work well in every respect. This method soon ensures a good description of lanterns for the night-duties of a ship.

Moored with a Swivel.

When moored with a swivel great care should be taken to veer it to the ground previous to blowing weather; after it is on the ground give the ship a moderate scope of her cables, when done you will find the ship ride much easier, and without half the risk of parting her cables. In fact the swivel becomes a fresh point of resistance from which the ship rides with the security of two cables, and from the two cables growing right ahead she will ride nearly with the ease of a single anchor with a long scope of cable. The moment the weather becomes moderate the cables should be hove in, and the swivel examined, as stones and dirt have frequently been found to prevent the swivel traversing well after it had been on the ground for any length of time.

Marline-spikes.

Marline-spikes should have an eye spliced in the end of their laniards. Frequent accidents take place for the want of this precaution. I have investigated several complaints on this subject of marline-spikes falling from aloft, and found them to happen from greasy, or tarry laniards, made fast with bad clove hitches, perhaps from hardly leaving end enough to confine the hitch; this not unfrequently happens when rattling the rigging. This I think likely to occur from the rigging being smooth, and a greasy or tarry clove hitch not being the best possible way to secure a marline-spike. The eye in the end of the laniard prevents accidents, as you can then reeve the marline-spike through it every time you wish to secure it. The sharp edges should be filed off the eyes of the marline-spikes, previous to the laniards being spliced into them, as accidents sometimes occur from the laniard being cut or chafed in the eye of the marline-spike. While on this subject, let me remark, I found it a good thing to make a marline-spike

for each of the petty officers, then, in the day of need, I never found any want of marline-spikes; besides, I noticed they always had a pride in having a nice marline-spike of their own, and generally kept it bright. This, little as it may appear, was of great use when anything had to be done quickly about the rigging, and entirely prevented any squabbling on the subject between the men and the petty officers.

On steam-vessels having main-topsails.

I believe I am right when I assert, that the main-topsail of a sailing vessel should be kept set as long as possible in blowing weather, more particularly when accompanied with a heavy sea. It is the resistance of the main-topsail, placed on such a long lever as the main-mast head, which gives the ship that easy motion which she so generally has when lying by the wind, under that sail. If from any accident you lose the use of this sail for a short time, the ship will soon convince you of its utility by her continued heavy rolling until it is set again. Storm-sails are not high enough to make sufficient resistance to the rolling of the ship: the shape of the storm stay-sails prevents their being of much use in steadying the ship in a heavy sea; besides, all low sails must be liable to the objection of being becalmed in some measure, in a heavy sea. How many ships were lost in former times, from the practice of heaving-to, or lying by the wind, under the square main-sail. It must appear wonderful to the seamen of the present day, how this dangerous sail ever could have been used for lying by the wind in heavy gales This sail, from its central position, and the difficulty of working it, should be furled previous to unsettled threatening weather. If seamen invariably admit that a main-topsail is the best sail for steadying a sailing vessel in gales of wind and heavy sea, the same must hold good with steamers; but in a much greater degree is the main-topsail required in a steamer than

in a sailing vessel. Sailing vessels have their weights more equally divided than steamers, therefore not so likely to strain themselves. The weights in a steamer are so placed, that a long steadying lever in the shape of a main-topsail, will go far to prevent that heavy jerking motion in a sea-way, which strains and disables them so often, when obliged to trust to their sails only, which must be continually the case when employed with fleets, or squadrons. I am under an impression, that if steamers were polacca-rigged up to 800 or 900 tons, it would be found a very handy rig; by this rig you would save tops, topmast rigging, futtock-shrouds, and numberless other ropes; the topsails should be rather squarer than usual, with short topmasts, and fidded top-gallant masts. I have little doubt of the polacca's topmast holding less wind with the decreased rigging and tops, than the struck topmast as at present fitted; this rig would be a great saving of expense, time, and labour.*

On the position of the masts.

It is not unfrequent to use a great variety in the standing of the masts, some ships have all the masts to rake more or less, and now and then you see a ship with her fore-mast stayed forward, &c., if the fore-mast is stayed forward, it is said to assist the ship in tacking, when once the head sails take aback, but I have my doubts, whether it does not resist her coming to the wind, quite as much as it does her good, after it once takes aback. The practice of staying the fore-mast forward must tend to make the sails on the foremast depress the bow. Raking the mizen-mast appears to have the effect of raising the stern, more particularly when scudding in gales of wind; this, therefore, may be useful when not carried too far; the rake of the mizen-mast enables that mast to bear

* This article was written when the *Rattler* was the only steam vessel of war that the author recollects having seen with a standing main-topsail, all the rest of the steamers having only flying main-topsails.

the weight of the braces, &c., of the sails on the main-mast better, than if it were quite upright. There can be little doubt about the upright position of the masts giving the square sails the best horizontal propelling force. Raking the masts will tend much to decrease heavy pitchings: the send aft of a ship is generally so small in proportion to her pitch, that you need not entertain any fear of raking your masts on that account: a ship in pitching displaces a quantity of water equal to the immersion of the bow, at which time a large proportion of the water rushes aft, upon which the ship falls, which makes her send aft with considerably less violence than she pitches. I have seen several vessels in which they were obliged to have recourse to raking the masts to make them easy.

Taut mooring.

This is a very injurious practice, both for the ship and cables, more particularly in shallow water. We will suppose a case: the ship is riding by the best bower, and the small bower-anchor is on the port quarter, and the ship taut moored, a fresh breeze springs up on the starboard quarter, the ship then quickly tends to the breeze until she is checked by the small bower-cable rubbing along the fine part of her bottom on the port side, and if the water is very shallow, the ship will perhaps be brought up all standing by the heel, and if the cable should go clear of the heel, you will not have timely warning to slack down the cable, but the ship's keel will rub over the small bower-cable until it slips up the cutwater and forms a cross with the small bower-anchor nearly on the starboard beam, and the small bower-cable underneath. If the ship should hang by the heel, it will generally give you timely notice to enable you to slack down ten or fifteen fathoms of the cable, which hangs the ship. The quantity of cable you think it will take to slack clear of the heel of the ship, should all run out at the same moment, for should you veer the cable in the

usual way, it would very likely not fall off her heel, until the ship came head to wind. A ship cannot rub over her cable without great injury to her copper. Ships often injure their copper very much from over taut mooring. Taut mooring has another great disadvantage, which is, when you are riding with a strong breeze, and a great strain on your riding-cable, you have all the additional weight of the tautness of your lee cable. I do not advocate slack mooring any more than I do taut mooring. I should think to have a ship moderately so, is the best.

Mooring.

If you are obliged to moor in a roadstead, always keep your open hawse to sea-ward; but in rivers where freshes are expected, the largest scope of cable should be laid to the ebb tide.

Mates of the hull.

This officer is generally chosen for his zeal, attention, quickness, and ability. If the situation be properly filled, it is one that requires the mind continually to be on the alert. From these mates we have every reason to expect our best senior lieutenants, because they are continually either receiving instruction from the commander or senior lieutenant, or carrying the views of the latter into execution. Much of the good order and neatness of a ship depend on a good mate of the hull. This officer is generally so conversant with the stations of the men, that he can detect, and put right in a moment, any man that he finds out of his station. This officer looks out to see all the minor parts of a senior lieutenant's duty well done, parts that are frequently not so well executed if done at all without this officer. I have heard many good officers remark, that they could tell on going on board any large ship, whether that ship had a good mate of the hull, or

not. By having a mate of the hull, the senior lieutenant feels that he has some one who takes the same anxious care about the ship with himself; this gives the senior lieutenant some little time to think about the higher duties of his station; he is not then obliged to leave the serious investigation of complaints, &c., about things which had much better be done by an inferior officer. I mention this subject of the mate of the hull, because I know some captains who think they are advancing the interests of the Service in taking everything in the shape of support from the commander or the senior lieutenant.

Master's assistants.

The rising generation of masters are too much employed about work that will be entirely foreign to their situation, the moment they become masters. Master's assistants should always be on deck as much as possible whenever the ship is going in or out of port, or in pilot-water; instead of which, it is frequently the practice to employ them entirely about the decks; and as the decks more particularly take up their attention when going in or out of port, these young men are deprived of many opportunities of gaining that local knowledge of places which will be so much required of them when they become masters. These young officers, we think, should be more under the master, particularly when the ship is in pilot-water. As these young men are bringing up to navigate our ships and fleets, the Service cannot do too much to give them every opportunity of acquiring information; and this most desirable object cannot be obtained except the young men themselves are attentive, zealous, and persevering. They should be so stationed as to be continually receiving the benefit of the master's experience in all that relates to the anchors, cables, rigging, holds, with many other *et ceteras*, to which they should be very attentive. Navigation, pilotage,

the working of anchors and cables, the rigging of the ship, the stowage of the holds, boating and unboating anchors, laying out warps, with numberless other things, may be acquired; but we fear the greatest difficulty these young officers have to contend with, is the want of opportunity to make themselves thorough seamen; therefore, that practical seaman-like judgment, which is of so much consequence in the master, under these circumstances must sometimes be found wanting, from the few opportunities they can possibly have of feeling the weight and responsibility of the situation they are to fill, until they become masters.

Mizen-stays.

Experience has taught us, that securing the mizen-stay or stays to the main-mast, is more liable to accidents than if secured to the deck. Formerly the mizen stay-sail gave a reason for the mizen-stay being so high up on the main-mast, for supposing the mizen stay-sail to be set up on a separate stay, still it was much handier to have the mizen-stay out of the way of working the mizen stay-sail. The very contrary is now the case, because the lower the mizen-stay, the better it is for working the main try-sail. To secure the mizen-mast independently ought to be considered a very desirable object. It must be admitted, if the main-mast, from shot or any other accident, should go below the mizen-stay, that the mizen-mast will stand a great chance of following it: and should the main-mast go above the mizen-stay, the mizen-mast will still be in great danger from the weight of the after rigging on the main-mast falling across the mizen-stay. When we take into consideration how much naval actions depend on the masts and rigging, we cannot be too careful in securing the masts independently, as much as possible. Let two ships of equal force engage each other under sail, let them both lose the main-mast; we will suppose one of the two ships has her mizen-

stay secured to the main-mast, and that in falling the mizen-mast is carried away; now it is plain that the ship which has her mizen-mast standing, must have a great advantage over the other; from being able to keep her wind much better, she can take up a more advantageous position, while the ship with both masts gone must run off the wind, and thus expose herself to a raking fire.

A man overboard at sea.

There are few things during the life of an officer that require more coolness and seaman-like promptitude, than when the alarm is given of a man overboard. If this should happen when the ship is close hauled, and no doubt about tacking, the best officers are of opinion that the ship should be tacked immediately, squaring the main-yard, and lowering the quarter-boat or boats, while in stays. I have seen this tried several times by throwing pieces of wood overboard from different parts of the ship, these pieces of wood generally came between the lee-bow and the lee-quarter, after the ship was well round on the other tack; of course the position of the pieces of wood thrown overboard, would depend much upon the rate the ship was going at the time, the place thrown from, the strength of the wind, and the height of the sea. If under the same circumstances, a man should fall overboard at night, the life-buoy should be fired and let go, this will give a good direction for the man overboard, and the boat to pull for; as many boats should be sent, as the nature of the weather will admit, as a few minutes generally decide the fate of the poor fellow, more particularly in cold weather. Lights should be hoisted to show the boats the position of the ship, and in foggy weather the bell should be rung, horn or trumpet sounded, as the lights may not be seen from the ship. Muskets would be much better heard, but as they are so often used to recall boats, it might

be deemed a recall, if not previously told that a great gun would be fired for that purpose. In thick foggy weather, if a man fall overboard, everything will depend on the number of boats and the quickness with which they are sent to his assistance. In this weather, the relative position of the ship with the boats cannot be known, excepting through the medium of sound. If a man should fall overboard when the ship is before the wind, round her to immediately, with the head-yards aback; at the same time lower the lee quarter-boat, station men aloft to keep pointing to the man overboard, have No. six and No. eight pendants (or any easily distinguished flags or pendants) where best seen by the boat or boats, one to signify, pull more to port, the other, more to starboard. The two pendants when hoisted together, might signify give way right ahead. To prevent mistakes, these pendants could be painted on the inside of the boat's stern, one on each side, and the two, one over the other, with their significations. If the ship is by the wind, and it blows too hard, or the ship not under commanding sail for tacking, heave-to and lower the lee quarter-boat. In vessels that have only one outside boat, and that over the stern (like many of our brigs of war), it becomes a matter of the greatest consequence to bring the vessel to the wind, so as to have the stern-boat's head to the wind, if possible, as you are very likely to swamp a square-stern boat when exposed stern foremost to a heavy sea. I have seen this take place. All vessels having but one outside boat, and that over the stern, should have her head and stern built alike. This would help to decrease the danger of lowering stern-boats. It appears to me that when an officer takes charge of the deck, his whole mind ought to be occupied with what he would do with the ship in any case of emergency that might take place with the sail that the ship is then under. If a man fall overboard when the ship is before the wind, and carrying

more sail than she can haul to the wind under, much of his safety will depend on bringing the wind abeam as soon as possible. In this position the lee quarter-boat can be lowered, while the square sails are shaking and taking in, previous to heaving-to with the head-yards aback. Unfortunately, there are circumstances, under which no human aid can be given to any poor fellow falling overboard, such as heavy gales of wind, when a boat will not live on the water; scudding when it is too dangerous to bring the ship to the wind, &c. Whatever the danger, or whatever the risk, there will be no want of volunteers for the boat to endeavour to save their drowning shipmate: however praiseworthy these feelings are, and ever must be, still, when you see no chance of saving the man overboard, and death staring the whole boat's crew in the face, if lowered down, there cannot be a doubt that this additional risk ought not to be run. In a case of this distressing nature, the life-buoy or spars, may be thrown overboard, in the hope of supporting the man, while the utmost endeavours should be made, by making sail and wearing, if there be any chance of placing the ship to windward and dropping down upon the man. In gales of wind, and the ship lying by the wind, and barely forging ahead, men have often been saved by ropes and bights of ropes well disposed along the chains and quarters, and even by ropes well astern. While there is the slightest, or the most distant chance of picking the man up, the life-buoy, spars, and oars may be of the greatest use to him. We have seen several men saved by spars, or oars. While on this subject, we think it a good thing to have a Jacob's-ladder fitted from each mizen-chains, sufficiently long to let the lower step go well into the water. This plan will be found to facilitate the manning and unmanning of the quarter-boats, at sea, or in harbour, and tend to prevent accidents from too many men getting into the boats while lowering down.

Spare messenger.

If anything should happen to the fore or main-chains, so as to disable several shrouds on one side, the spare messenger, from its size and length, will make a capital pair of preventer-shrouds. Take a round turn round the mast-head, parcel it well, middling the messenger as near as possible, take the two legs through one or more of the main-deck ports, according to the best lead for supporting the mast. Parcel and grease the parcelling in the way of the chains and main-deck ports; the ports being previously prepared by the carpenters. When quite ready, set the shrouds well up on the main-deck to the ring-bolts, or where the greatest security can be found.

Boatswain's mates.

Boatswain's mates from sickness, or from other causes, often run short. To obviate this, we have known one or two of the most active, seamanlike, and best characters amongst the boys, picked out, and taught to blow the boatswain's call. The boys were stationed in the tops, or under the captains of the forecastle, until their services were required; but when short of boatswain's mates in setting up rigging, squaring yards, &c., one or more of these youngsters attended on the gangway to pipe the side, or call away boats' crews, &c. It continually happens, when duty of the greatest consequence is going on, that a fine active boatswain's mate, who is in the midst of forwarding the duty of the ship, is called away to send some man aft, call a boat's crew away, or pipe the side, &c., things that could always be done by one of these full-grown youngsters. These youngsters, when not actually looking out for the boatswain's mate, should be employed in seamanlike duties, such as will fit them for first-rate boatswain's mates. I was in a frigate where we tried two youngsters as above stated, and it answered beyond the expectations of any one on board. The boys were proud of their

situation, learned to blow the call within a month, and shortly after, in very fine weather, took charge of a day watch when a boatswain's mate was sick or employed, and so on by degrees to a night watch. The lads here spoken of, in a few years became boatswains, and from all I can hear, very good ones. By this means there would always be a set of smart young fellows looking out for the rating of boatswain's mate, who have already been trained to the duties of that situation, instead of having to teach men how to fill the duties after they have obtained the rating of boatswain's mate.

Mooring boats off from the ship.

After a ship has approached some degree of order, officers are much divided about taking care of the boom-boats. Some officers continually moor them off from the ship, while others moor the launch astern,* and hoist in the barge and pinnace, and only hoist them out when wanted. The officer who hoists the boats in and up, and has the launch well moored astern, will feel much easier in his mind should it come on to blow, and will be able to give his undivided attention to the ship, instead of having fearful anxiety about the boats breaking adrift, sinking, or being run over by vessels; and should a boat be wanted in blowing weather to assist a vessel in distress, &c., the launch is then quite handy for that purpose; and should the barge or pinnace be required in such weather, they could be much easier hoisted out, than brought alongside from their moorings. When boats are continually kept at their moorings, they are always full of wants. They want a boat to loose their sails, a boat to furl their sails, a boat to bring the men to and from their meals, a boat to look at their moorings, and bail them out every night, &c.; in fact, when you have many boats at moorings, you have continual de-

* The practice of leaving any boats out, or down, during the night, cannot be advocated, excepting in cases of great emergency.

mands for boats to go to and from them, and not unfrequently obliged to furl sails, &c., short handed, from not being able to take the men out of the boats in time. If care is not taken to have these boats alongside often, they frequently become receptacles for scrubbing and washing clothes, which they dry by spreading them on the boats, oars, &c. These boats are very often made the medium for smuggling spirits into the ship, by its being secreted in them by shore boats during the night. If from a close harbour, &c., the boats are continually obliged to be out, they should now and then be hauled up for a day or more, or they will be found very heavy in hoisting in. While on this subject, in blowing weather, the lower booms are frequently left out, when it is quite impossible that they can be of the least service for boats. We have often seen the lower booms kept out when the lower yards and topmasts have been struck, much to the annoyance of boats wishing to come alongside in such weather, as they are then in the worst possible position for a boat dropping alongside from to windward. Boats are frequently much endangered by these booms being left out too long in blowing weather.

How to shorten lower masts without taking them out.

On our passage out to the Cape of Good Hope in Her Majesty's sloop *Jaseur*, she was found to be very much overmasted; and on our arrival at the Cape, the Commander-in-Chief, Sir Charles Schomberg, gave orders for her lower masts to be shortened. We accomplished it in the following manner. When stripped to the lower masts, the two main-topmasts were erected as sheers for the fore-mast; the lower rigging being removed, the purchase-blocks were lashed to the mast, (the decks having been previously shored up), shear guys were hauled well taut to the stem and stern of the

ship; when everything was quite ready, the mast was hove up sufficiently high for the carpenters to cut off the quantity required, on the lower deck, and make a fresh step; previous to which, rackings were put on every part of the purchase, where they could possibly be useful. The fore-mast was stepped again in about an hour from the time that the carpenters (the dead-eyes being turned in afresh at the same time), commenced to work at it. The sheers were then walked aft, and the main-mast raised, cut, and stepped in the same manner. The fore and main-mast were then rigged, and the sheers were then taken down. A derrick was made of the spare main-topmast, by which the mizen-mast was raised, cut, and stepped. The whole was done in a very short time.

Taking out wedges for staying the lower masts.

If the masts stand as you wish them from the step to the upper wedges, why increase your length of mast to correct your line of mast by the stays? As the fault must be then from the upper wedges to the mast-head, in my humble opinion, you only increase the difficulty, because you cannot take out the wedges without considerably increasing the length of mast to be stayed. Suppose a few more decks placed on a ship, and the masts having a good line from the step to those decks, then wedge them up to it, and you will have a much better line than you can possibly get by the stays; but if you wish to alter the rake of the mast, or to get it farther forward, of course the wedges must then be taken up. I have always thought that a taunt flush vessel required the most attention to keep her masts in a good position. This I think, may be attributed to the small quantity of mast which she houses, coupled with the decreased diameter of her lower masts. I advance this with the greatest deference, as many good officers have a contrary opinion on the subject of staying masts with the wedges in.

On rolling motion with light winds, with yards square.

It often happens that a ship is making little or no way, still rolling very much with all her yards square. In this case, if the yards were braced up, the ship would be much easier, and have considerably less wear and tear, besides the inconvenience to every one on board. All fore-and-aft sails, set taut with their sheets amidships, tend materially to prevent rolling.

Manning yards and dressing ships with flags.

When the men are not sized according to the make of the yards, it becomes very evident to the crews of ships looking on, more particularly when the ship having her yards manned is a large one, then, the difference between the yard-arm men and those in the bunt will be considerable; of course, in every ship, in proportion to the difference between the diameter of the yard-arms and the quarters of the yards; and as, from the quantity of sail to be stowed away in the bunts, much of it is sometimes slewed up on the quarters of the yards, which tends still further to destroy the appearance of the men on the yards. In dressing ships with flags, at present the rainbow fashion appears to be the one most used, nothing can look prettier than this mode of dressing a ship, while you have the wind on either beam, but, as ships mostly ride by the head, that part will generally be to the wind, and with the wind ahead, a ship dressed over all fore-and-aft will not blow her flags out clear. Dressing a ship with flags may be compared to decorating a room with pictures; a number of ill-chosen and indifferent pictures crowded together in a room take from its appearance; whereas a few well-chosen and well-placed pictures add much to its beauty. We well recollect how much the *Royal Sovereign* used to be admired for the way she used

often to be dressed in flags during the summer of 1827 and 28, when the late king, then Duke of Clarence, had his Lord High Admiral's flag flying on board of her. From the *Royal Sovereign* being a yacht, it may be supposed she had a greater command of handsome flags than any private ship. She dressed in the following manner:—a flag at each mast-head, one at each yard-arm, one at the mizen-gaff, one at the driver-boom end, and one at the flying-jib-boom end. The flags at the yard-arms, flying-jib-boom end, and driver-boom end were suspended with weights at the tacks, and a little before sunset small lines were bent on to the weights to haul them down, and inboard. In dressing over all athwart ships, the flags should not go too low, as they are liable to be much damaged by firing the guns when saluting.

On topmasts being struck for a lengthened period.

We have often seen ships undergoing repairs, caulking, clearing out holds, &c., with their topmasts struck, even for months, with all their running rigging rove, and topmast rigging stowed away in the tops. Experience has shewn, that this bent position in which you are obliged to keep rigging in the tops, when the masts are struck for any length of time, is very injurious, more particularly to the standing rigging. As ships so situated are not generally expected to follow the Admiral's motions, it would be well if they were always to unreeve their running rigging and stow it away below. The laniards of the topmast rigging should be unrove from the dead-eyes, and set up moderately taut to a sheer pole, previously secured to the lower rigging, sufficiently down to bring the topmast rigging hand-taut; the shrouds and backstays should all be well parcelled with tarry parcelling in the way of the tops. The backstays should be snaked from side to side down the lower rigging, giving as much curve as pos-

sible to the bends. Attention should be paid to see that there are no sharp bends in the topmast-stays, or any other part of the rigging. The heels of topmasts should be well lashed, having previously parcelled the lower masts in the way of the lashing. Few things destroy standing rigging more than sharp bends, and exposure, for any length of time, to the weather. For this reason, sheep-shanking the backstays, or shortening the rigging by sharp bends in any way, should be discontinued as much as possible.

Accident to main-topmast.

A frigate in the Mediterranean some years since, had her main topmast so rent and shattered by lightning, that it was impossible to slack any of the rigging without the greatest danger of the mast falling; when the following plan was adopted, to the best of my recollection. A light spar was attached to each side of the topmast; these spars were then lashed every three or four feet round the spars and topmast together; when done, the mast was unfidded: two carpenters were then stationed on the lower cap to cut away the splinters, that they might not impede the lowering of the mast, and at the same time to cut the spars placed on each side of the mast, and a sailor to remove the lashings as the ends came near the cap. The mast was again lashed to a hawser in its descent, by hands stationed under the main-top for that purpose; the mast was then received on deck with the greatest safety. Whereas if the mast had been allowed to fall, much injury must have been done to the rigging, and perhaps to the ship. The two light spars that were cut for striking the masts, were still very useful on board.

With only two cables to moor with, nearly a cable each way.

Previous to letting go the first anchor, unshackle the inner ends of the cables, and shackle them together abaft the main-

mast (minding to guard the after-part of the mast as much as possible for chafing while veering); when done, let go your first anchor, and if you have a moderate depth of water, you may perhaps be able to veer to nearly a cable and three quarters, before you let go your second anchor; which, when you heave in to your first anchor, will place your ship with rather better than three quarters of a cable each way.

Fidding-topmasts.

The moment your topmasts get above the lower yards, it will be right to truss them well-to, as at that time the weight on the top-tackles is fast increasing from the whole weight of the rigging and backstays, and the topmasts being obliged to fit rather tight in the caps, and squares of the heels of the masts. I have seen two topmasts saved by being brought up by the lower yards, after both top-tackle falls had been carried away, and without doing the slightest injury to the lower yards on which the topmast slid between the lower-mast and the slings of the lower yards. If on the contrary, they had not been brought up by the lower yards, many lives must have been endangered, besides damage to the ship. In fidding topmasts, you will not unfrequently see topmen standing on each of the lower caps to overhaul, and light up the gear: this practice ought never to be permitted, because, if any accident should happen to the top-tackles, or even a surge when the masts are not very high, it might endanger the men's lives; but should the nature of the accident allow the topmast trestle-trees to strike the cap, their lives would be still more endangered. I once saw a sloop of war's main topmast come down by the run just before it was high enough for trussing the main-yard to; these vessels having only one top-tackle, the other sheave being dumb. The top-tackle fall was carried away, the hawser surged by accident, and the mast was only brought up by the thimble in the top-tackle

pendant jamming in the top block. The mast came down with such a jerk that it drove the cross-trees and rigging nearly a foot up the mast-head, and made the main-mast tremble. I merely mention this case to show, if men had been on the cap, the danger they would have been in at the time of the accident. In fidding topmasts with lower yards struck, if not sufficiently manned to accomplish both at the same time, sway your topmasts high enough to place a crow-bar through the fid-hole, and secure the falls; sway up the lower yards, and truss them well to the masts, and you will then fid your topmasts free from danger.

Fidding top-gallant masts abaft all.

This plan certainly gives you an opportunity of setting your topsails much quicker when top-gallant masts are struck, as you can set the topsails and fid your masts afterwards. You may often wish to shake a reef out, when it would not be advisable to fid the top-gallant masts. Many good officers during the war preferred this way of fidding top-gallant masts, as it gave an opportunity of getting sail on the ship quicker than fidding top-gallant masts before all.

Mustering ship's company by the open list.

When a ship's company are to be mustered by the open list, it will much facilitate that object by forming the men four deep on one side of the deck, all facing aft, each man taking his number exactly as he stands on the ship's books, the first numbers being as close aft as convenient, and forming four lines from aft to forward along the quarter-deck and gangway: when the first four men have answered to their names, the second four take their places, and so the whole ship's company keep closing up from forward to aft, until all are mustered. By this mode of mustering a ship's crew, the men are all in

their places as they stand in the ship's books, previous to their names being called over by the open list; this is done by officers stationed for that purpose, who should each take a hundred, or less, according to the size of the ship. These officers should muster the men into their places the moment the hands are turned up to muster, and attend, and keep order and silence, until the men have passed inspection. When a ship's company are mustered by the open list in the usual way, the men are so much huddled together, that if a man does not exactly recollect his number on the ship's books (or from any other cause), it takes him some little time to push through the crowd to answer to his name. When the men are mustered by falling in four deep, each man soon recollects his number and place, and the whole muster is done with system and regularity, and none of that shoving and squeezing for men to get through the crowd to answer to their names.

When lower masts are stripped.

As many accidents have occurred to lower masts when unrigged, from the want of proper security, it would be desirable on such occasions, that the lower masts should have both fore-and-aft and side support, in proportion to the place and circumstances; and the less mast vessels house, the more rigidly this rule ought to be attended to. At the same time it should be borne in mind, that should a sea get up, a vessel will roll much more with all her spars down, than when they are aloft.

Magazines ventilating.

Those who have made a point of seeing the state of the magazine men on leaving their quarters after a long general exercise with powder and shot, must have observed the exhausted state of these men at such times. This is occasioned by the necessary exclusion of all communication with the ex-

ternal atmosphere by fire-screens, &c., from which the air in the magazines soon beomes vitiated, more particularly in tropical climates. It is no uncommon occurrence after such exercises, to see the men leave the magazines in an extreme state of exhaustion, with their clothes quite as wet as if they had been overboard. If a good plan could be devised for ventilating the magazines of ships, more particularly large ones, on such occasions, it would be most desirable.

Quarter-deck Splinter-Nettings.

These nettings are so little required during peace, that they are almost never seen; but in action there can be little doubt of their utility in protecting both men and guns from falling ropes, &c. A temporary splinter-netting can very easily be made in the following manner. Take two coils of rounding, or any worn, stretched ropes, about two-and-a-half inch, take a coil on each side of the quarter-deck, then make fast one end of each coil of rope to its opposite fore-mast shroud of the main rigging, then keep crossing the two coils, taking them from side to side round each of the main-shrouds from forward aft; so on to the topmast-backstays and mizen-rigging. If you then think your temporary netting too open, you have only to run a few fore-and-aft turns along it, where it is most open. A splinter-netting of this kind can be got up in a very short time, say from a quarter of an hour to twenty minutes. This sort of splinter-netting was used in the *Powerful*, at the Battle of Acre. If you have time to seize the two parts of the ropes together round each shroud, and seize all crossings well, it will make the temporary netting much more secure.

Boarding-nettings.

We have heard of boarding-nettings being made to resist the cutlass in the following manner.—Tar the boarding-netting well all over with Stockholm tar; spread it on rather a coarse sandy beach; sand the netting well on both sides as long as you continue to see the least sign of tar. When done, let the sand dry in with the tar, and if well done, it will go far to resist the weapons generally used in boarding. A fine warm day will be best for tarring and putting the sand on the netting, and then let it dry in the shade.

Officers of the Watch.

We have often seen sails and spars much endangered, and sometimes split, or carried away, from deferring to reef or shorten sail in the night watches; and though the breeze may be gradually freshening, and every opportunity of shortening sail in good time, still the sail is carried on, to be taken in by the relieving officer. We are sorry to observe, that we have seen this take place on several occasions, so much so, that it has been dangerous to take the sail off the ship with both watches. From this practice, the watch which ought to be in their hammocks, are often kept on deck an hour or more. This falls very heavy on the men when it happens to be their middle watch below, for out of the very few hours they have in their hammocks, an hour or an hour-and-a-half is much felt by them. No officer, whatever may be his abilities, or however much he may be on his guard, but may sometimes be taken by a sudden squall; however, with the watch of a man of war, sail can so soon be taken in or set again, that, excepting in cases of great emergency, no officer ought to risk the carrying away of sails or spars, and frequently endangering life, for the empty consideration of being considered a dashing character. We have known vessels much risked from officers wishing to have the name of fine fellows for carrying on sail. If the officers of the watches are not allowed to be relieved

until the evolution of shortening or making sail, &c., is completed, it will go far to prevent the custom of leaving many duties to be done by the relieving watch the moment they come on deck.

Ordinary seamen.

Young men holding the rating of ordinary seamen, however good they may be, experience great difficulty in re-entering the Navy when paid off with that rating: this bears very hard upon those who have risen from boys in the Service, many of whom enter the Navy with the intention of remaining in it during their lives, or until they can obtain a good-service pension; but these, often unfortunately, we think, for the good of the Service (even) when men are not plentiful, find great difficulty in obtaining ships, from the anxious wish of most officers to have none but able seamen in their ships. We think it would be well not to discourage those who have been brought up in the Service from boys, as in these boys, we must look in a great measure for our future seamen in the Navy, the merchant service not supplying men equally well trained to those brought up in the Navy. The merchant service, from the number of steamers, docks, &c., now supplies more seafaring men than seamen. With all the efforts the Admiralty have made to induce the boys to become the rising generation of seamen, it cannot be desirable in officers to check them, when the Service is about to receive the benefit of their instruction. We have met with many of these lads with the rating of ordinary seamen, walking, sometimes from London to Portsmouth, or Portsmouth to London, and on being asked if they wanted ships, reply, "Yes, but they would not take ordinary seamen to the Eastward, or, on the contrary going to London, because they would not take ordinary seamen on board the ships fitting out at Portsmouth, &c." The services of these young men are frequently entirely lost to the Navy,

from meeting with continual refusals, till at last they give it up, and if they cannot get into the merchant service, they leave their country for America, in disappointment and disgust. Many of them have applied to me personally, to get them into men-of-war, and I have seldom been able to do so without the greatest difficulty, and then, only as a matter of favor.

N.B.—This was written before the Author knew the Admiralty had taken all possible means to prevent the above practice, and that orders had been sent to all the Ports, to give ordinary seamen and boys brought up in the Navy, every facility for re-entering the Service. Still I have inserted this subject, in hopes that it may meet with the eye of some officers who will feel it a duty they owe to their country to smooth the re-entry of ordinary seamen into the Navy.

Main-deck Ports badly secured against a surprise.

The way the upper half-ports have been fitted in every vessel that I have had the honor to belong to, when fitted by the Dock-yard (to the best of my recollection), was merely a hole bored on each side of the port, and a knot worked on the end of each of the laniards, and then rove through these holes. I was in a frigate, in the days of reduced complements of men in the Navy, where we had two boats above our complement; therefore you may suppose, when they were all manned with their proper proportion of marines, that we could not have too many men to defend the ship. It was under these circumstances, one morning, the captain ordered every boat in the ship to be manned and armed for an attack on the ship. The moment the boats shoved off, we beat to quarters, but found our main-deck guns so thinly manned, that it was thought best to ship, and secure all the main-deck ports well, and have the crew ready to repel boarders in every direction round the upper decks, supposing that, when the boats' crews saw the ports shipped, that they would try to take the upper deck. But to our great surprise, we now found the few men we could spare on the main-deck to defend the ports (in case such an attempt should be made) were all driven to the upper-deck, and the boats' crews in complete possession of the main-deck and all the hatchways; therefore, they soon took the ship from us. The lieutenant who commanded the attacking boats told me afterwards, that he had, previous to the attack, stationed several men with sharp knives to cut the knots of the laniards of the ports, consequently they were unshipped immediately, and the boats' crews forced their way through most of the ports at the same time. This never could have taken place, if the port laniards had been spliced into eye-bolts, or ring-bolts. In case of vessels being attacked by

the enemy when short handed, it will be found necessary to guard against this bad way of securing the ports.

Going in, or out of, unfrequented ports.

The services of ships of war are frequently so urgent, that they cannot wait for daylight; in such cases, the most careful officers generally send boats to anchor off the most dangerous shoals in the ship's way in or out of port, with lights at their mast-heads, there to wait until recalled. I have seen ships taken in and out of the most dangerous harbours, at all times of the night, in this manner.

Lower mast-head pendants.

These pendants in many ships are hauled close up under the eyes of the rigging, and stowed away in the tops for neatness. This way of placing the pendants will be found very injurious to the rope, for in so doing, you must give two sharp bends to the rope, one, under the eyes of the rigging, and the other, over the top; and large rope like a ship's mast-head pendants, cannot be bent without displacing the spun-yarn; and as the legs of the pendants are parcelled for turning the water off, when hanging down in the direction of the shrouds, therefore, if a contrary direction is given, by hauling the pendant up in the tops, a lodgment is made to receive the water, by which means the rope gets rotten, more particularly in the bends. The mast-head pendants should be neatly stopped up and down the shrouds. The number of purposes of consequence for which these pendants are used, besides setting up the rigging, ought to insure the greatest care being taken of them.

Pointing, grafting, mat-making, &c.

When possible, always endeavour to have jobs that require any nicety, finished by the same men who commenced them;

if this is not attended to, pointing, grafting, mat-making, &c., are seldom so well done, and when found fault with, you have great difficulty in detecting the careless person, from the jobs having been shifted about from watch to watch, and often to different people in the same watch. When these jobs are called in to be examined, much unpleasant feeling is created in endeavouring to find out the persons in fault, which, from the number of hands the jobs have passed through, will make it extremely doubtful whom to blame. If men cannot be spared to work throughout the day in harbour, or only in their watches at sea, let the same men take the same jobs, when they can be spared, or in their watches on deck at sea, by this you will have more work done, and better done, as the same men then not only feel themselves responsible for the job, but take a pride in turning it well out of hand. We have known this last plan practised for many years, in harbour and at sea, by which means, the jobs were always done in a more seamanlike manner, and quicker; it stopped much bickering amongst the crew, consequently, many complaints on that subject. There are few of the running ropes of a ship that cannot be pointed during a watch, if commenced at the beginning; yet how often we see these ropes not opened out for pointing until nearly the end of the watch, thereby involving a second person in the pointing of a small rope, or perhaps its being overlooked, and left all night to swab the deck during the working of the ship, and then to be cut off, previous to a second commencement, to point the same rope. To insure a job of this kind being done by the same men off hand, it should be given to a man who has neither helm or look-out, &c., during the watch, if possible.

Parrel, or parrel-lashing, of top-gallant yard carried away.

When the parrel or parrel-lashing of a top-gallant yard is

carried away, much of the whole force and weight of the yard and sail are then thrown at the mast-head, and the top-gallant mast endangered by it. If the ship is by the wind, the top-gallant sail had better be braced aback immediately, and lowered at the same time; but if before the wind, the top-gallant yard should be braced by, and lowered immediately. Great care should be taken that the top-gallant sheets are not started, as that would much endanger the mast by the sail forcing itself against, and perhaps entangling itself round the top-gallant stay. A topsail-yard may have its parrel repaired in the same manner, if carried away in moderate weather; but if blowing hard, with double or triple-reefed topsails, the returning weight of the topsail-yard, and force of the sail when thrown aback, might endanger the mast, yard, or lee-topmast rigging; as however taut the weather topsail-brace may be when the parrel is carried away, and the ship by the wind, the yard will surge over to leeward, and thereby allow the yard to swing far from the mast. We think, in such a case, if the down-haul tackle, and weather clewline were instantly manned, and the yard walked down until the lifts were taut, that the yard might then be squared, and the parrel repaired; but if the weather-brace should be carried away when the parrel goes, and the weather yard-arm flies far forward, it will then be advisable to put the helm up, and bring the wind on the opposite quarter, keeping the yards braced up as before on the mast to which the accident has happened, and steer the ship so as to let the wind blow along the sail of the disabled yard until it gently returns to the mast. When done, lash the yard on each quarter to the topmast rigging, and the topsail tye-blocks well round the mast, then fit the weather-brace and parrel. Too much care cannot be taken in keeping fast the topsail sheets, as upon that will depend much of the safety of the mast, yard, and rigging, as the heavy flapping of a topsail will be likely to shake everything to

pieces. A spare parrel should invariably be kept in each top. But I am inclined to think a very good method is one adopted by an excellent officer, viz.—In either case just spill the sail, without its flapping, unbend the clewlines from the clews; if top-gallant sail, make the ends fast on the after trestle-trees; if a topsail, lash the clewline-blocks on to the after-part of the topmast-cap crossed, clew down the yard (with help of braces) secure the yard, and parrel afresh.

On the necessity of sounding the pump-well more frequently, when at anchor.

While at sea, nothing can be more strictly attended to in vessels of war generally, than the frequency of sounding the pump-well, and the report to the officers of the different watches, stating the exact quantity of water in the ship at each report; but no sooner is the anchor down in many ships, than this necessary precaution is entirely neglected. I do not for a moment mean to infer that the same care and continued reports are necessary in harbour that are required at sea; still, from what I have heard and seen myself, I am quite satisfied that this is a subject which ought to receive more attention than it does in general. I was in a newly commissioned ship, we were much lumbered, and on our arrival in port, after we had cleared the ship of everything that had to be taken out, early next morning we commenced to clean and wash all decks; at the usual time we piped to dinner, and the men were to have had an hour and a half to their dinner, but about a quarter of an hour before they had had their time, the mate of the watch, in looking over the side, saw that the upper part of the ship's copper was much nearer the water than it ought to be; the well was immediately sounded, and upwards of four feet water was found in the hold. As soon as possible after the water was pumped out, the bread-room and afterhold were obliged to be examined; the bread and

other provisions were found damaged, as also some few cases of powder. On enquiry, it was found that the carpenter, who was attending to the wash-deck cock, had forgotten to turn it off previous to going on deck. Capt. Glascock, in his *Naval Manual,* mentions a similar circumstance. There are no want of proofs that vessels have often met with such accidents. Suppose an occasion of the kind mentioned to have taken place in the afternoon, had occurred during the long nights of winter, and the pump-well had not been sounded previous to the ship's company going to bed, who can tell what might have been the consequences. On a dark night the ship would perhaps settle down quietly, without the officer of the watch, or any one on deck, having the least idea of what was going on.. The first intimation of the ship's settling in the water, would very likely be given to the sentries in the cock-pits, or the men in their hammocks on the orlop-deck, by the movement of the tanks, casks, &c., breaking loose in the holds. This would not be a very pleasant situation for any ship to be placed in, more particularly at night. The carpenter should always make a nightly report of the quantity of water in the ship, while in port, as well as at sea. I was in a frigate in 1822, where the first lieutenant prevented the possibility of such an occurrence taking place; and the plan would be of essential service if all ships were so fitted. The cistern for washing decks was destroyed, and the wash-deck pump was fitted with a dumb box, driven in at the bottom, and made water-tight; the pipe from the ship's side was introduced into the pump, and made secure with a strong leather flange, nailed to the pump, consequently the water stood in the pump at the same level as the sea; no water could be got when the cock was turned off, and an instant and constant supply when the cock was turned on, without the possibility of any escape into the well, which being kept dry, contributed much to render the holds dry, and the ship's company healthy. This plan was never at fault.

On leaving port when first commissioned.

When a ship is newly commissioned, and circumstances will permit, it will always be advisable to sail in the morning, in preference to the afternoon or evening. If a vessel sail in the morning with a newly-raised ship's company, they will have had time to see a little of the working of the ropes, sails, &c.; an opportunity of finding out that everything leads clear and well: things will in a great measure have fallen into their places, and ample time afforded to lash and secure anchors, boats, guns, &c., previous to night coming on; when, should it come on to blow, the vessel would be much better prepared to encounter a gale, than if she had sailed in the afternoon or evening. A ship sailing in the morning gives the further advantage of observing the working of the crew, and greatly tends to establish that confidence between them and their officers, which is so essential in a newly-raised ship's company; whereas, if the ship sail in the evening, and fall in with heavy weather, not so fully prepared, the crew will have full occupation through the night; the work falling principally on the good men (skulkers being screened by darkness from the observation of the officers); and the first impression on the minds both of officers and crew, will be alike subversive of that mutual confidence and reliance, which is the life and soul of a man-of-war, and may take months to fully remove. If the saying be true, "that ten minutes daylight is worth an hour of dark," how much more valuable is a whole day, than encountering night, and stormy weather, with a newly-raised ship's company. Eight or ten hours daylight at sea, is worth a week's preparation at Spithead. There are many other reasons why it is much better to sail in the morning than in the evening: an important one is, that the men are less excited, as their wives, relations, and friends, will have left the vessel the previous evening; but if you sail in the evening, the wives, relations, and friends, do not leave

the ship generally, until a few hours before sailing; and we all know, that with every precaution that can be used, many of the crew will become "fresh," by what they procure from such visitors. And the natural consequence of which state, is noise, confusion, and the probable chance of danger to life, spars, and canvass. From the changeable weather we generally experience in this country, no vessel on first sailing can possibly do wrong in having all her storm fore-and-aft sails bent, and kept so until well clear of the land, without any reference to the season of the year; as in a newly-commissioned vessel, difficulties will be encountered in bending storm-sails, if left until the breeze actually commences. Things that are nothing after the crew have been accustomed to work together for a little time at sea, are difficult at first, from the crew being generally made up of men from almost every-sized vessel in the Service; and perhaps many of them at first, not having their sea legs exactly. Too much sail ought not to be carried at night, in a newly-commissioned ship, until the abilities of the officers, and seamanlike qualities of the ship's company are known. One of the strongest proofs of a vessel's being in good order, is that man-of-war like discipline, which insures the most willing and cheerful obedience during the night. During evolutions in the day time, when the eyes of the officers are on the ship's company, the chances are that things will mostly go right; but in cases of extreme danger at night, to sails, spars, &c., your chief dependence then is on the exertions of the crew; and that ship invariably performs these important services the best, where the greatest mutual confidence exists. How often have we known the courage of a few fine fellows to save a topsail, by going down the weather topsail-lift, and so furling the sails by degrees from to windward, and this at a time when the heavy flapping of the sails would have been almost certain death to any one attempting to do it in the usual way. The numberless cases of heroism

we must all have known (more or less during a long sea life), in heavy gales and dark nights, with none to witness their individual exertions but God alone. After the danger is passed, how often have we heard that John so and so saved a mast, by cutting a sail away from the yard, &c. I was coming home in the *Thracian* (1825), when off Cape Hatteras (having experienced blowing weather for several days, it increased so much that all the square-sails were well furled, and storm-sails set) in the middle of the night the ship was thrown upon her starboard broadside; however, a part of the crew immediately commenced to throw the lee guns overboard; the mizen-mast was ordered to be cut away, and on its falling across the main-yard (which was braced up) from the mizen-stay dragging it forward, the mizen-mast became so jammed, that it hung on and endangered the yard, and perhaps main-mast itself; at this critical moment, a fine fellow from the main-top, without orders, slid down the main-yard, and cut away the gear that held the mizen-mast, which he accomplished single-handed; and thus was the safety of one of Her Majesty's ships, and the lives of the crew, in a great measure indebted to the courage of one brave fellow. When a ship goes through her evolutions well and quietly on a dark night, it proves her good order much more than any day smartness, as it not only shows that every man is in his station, but each doing his duty well in that station. It is the satisfactory evidence of that confidence and good understanding, that is always so desirable to have established between the officers and crew in men-of-war, and which (I trust I am borne out in saying) is pre-eminent in our Navy.

Prisoners.

If a ship, from having state prisoners on board, or any other cause, which may require her to be well-guarded, be at an an-

chor, two boats should row round her in opposite directions, and not too far from the ship; if this is strictly attended to, it renders escape almost impossible, even though the person or persons should have eluded the guard on board. A ship has so many places through which a person may slide himself quietly into the water, and should there be a tide, if he is only a sufficiently good swimmer to be able to keep himself perfectly motionless until he gets a little astern of the ship, he may consider his escape almost certain, when there are no boats rowing guard. Suppose all the boats to be hoisted up, and a prisoner should have escaped so far as not to be seen until he is actually in the water, under such circumstances, prisoners have frequently effected their escape, though sentries have fired, and boats have been lowered down. As it is not an uncommon thing for prisoners to make their escape from ships of war, when confined for breaches of discipline, it would be well in cases of consequence to guard the ship both inside and outside. The escape of many prisoners may be attributed to the confined space in which sentries are often placed in, while in charge of such prisoners. On many occasions, sentries so posted have not room to walk about, in consequence of which, they often sit down, and sitting down in a close place soon leads to farther relaxation, till the prisoner is at last actually put in mind of trying to make his escape by the snoring of the sentry.

Having show-poles above the royal rigging.

The top-gallant and royal masts are mostly supplied from the Dock-yards, made out of one spar, and with very little mast-head above the royal rigging. Though these masts, everything considered, are allowed to be the very best masts for general service, still, in some ships it is the fashion to have several feet of show-mast above the royal rigging, thereby

making these masts unhandy for shifting, and much more liable to be carried away; and from its being contrary to the Dock-yard establishment to supply them, officers who admire these long show-poles, are obliged to have recourse to many expedients to obtain them; but when spars cannot be procured for making such masts, the last resource is generally to scarph and hoop poles on to the royal masts, which not only adds to their weight at such a long lever, but the masts are seldom so strong as before they were scarphed, still they have to bear the additional weight of poles. When so much weight is placed above the royal rigging, it is quite impossible that the royals or top-gallant sails can be carried so long as if the trucks were close down to the royal rigging, or nearly so. Though six or seven feet of show-mast may perhaps look little or nothing on deck, still, when perched so high above the royal rigging, and without any support, every pound of unnecessary weight, and every square-inch of resistance they offer to the wind, must be of consequence; and if you attempt to support these masts with stays and backstays, they hold much wind, give endless trouble, and expend all your sea store of small rope, besides the useless expense. Officers who have been accustomed to use stump top-gallant masts on bad weather stations, will have found how much longer top-gallant sails can be carried by having the weight of the royal mast off when carrying sail in a breeze. If this hold good with the weight and pressure being taken off the top-gallant mast, it must hold good in a greater degree with the poles above the royal rigging from their increased height, and consequent increased difficulty of supporting them, if supported at all. If any plan could be introduced that would make a ship's hull, masts and rigging, offer less resistance to the wind when sailing close hauled, it would accelerate her much in working to windward. This being admitted, even every unnecessary rope that holds wind in a strong breeze must be, in a measure, against the

ship. If a ship's rigging, by any improvement in rope-making, could be made much smaller, yet equally strong, it would not only offer less resistance to the wind, but in a breeze, or whenever the ship lies over, the mast would be relieved of weight in proportion to the diminished size of the rigging; the weight of the lee rigging no doubt has often decided the fate of a mast. It was no uncommon thing formerly, when carrying sail by the wind, to see the upper masts relieved of much of the weight of their lee backstays, by having a burton hooked to each lower mast-head; strops were then passed round all the lee-backstays on each mast, and the burtons boused gently taut; by this, the upper masts were relieved of the weight of their rigging nearly the whole length of the lower masts, which is by far the heaviest part of the rigging in proportion to its length, as the dead eyes, laniards, &c., are there. When ships have been chasing, or trying rate of sailing, much advantage has been found in shipping all the weather ports, lowering the quarter-boats down square with the vessel's hull, and all unnecessary things taken out of the rigging, &c. In a flush vessel, the stern and lee ports had better be unshipped, more particularly if she has a poop, as it will allow the wind from the courses to escape.

On the single whip and pendant.

The single whip and pendant, when applied to working ropes, has several disadvantages. In the first place, the block and strop, through which the pendant reeves, must have the whole strain, whereas, with the double whip, nearly half the strain goes to the standing part. This is more particularly observable when the whip and pendant are applied to topsail-clewlines, for then the whole weight of clewing up the topsail, falls on the quarter block-strops; consequently, they are carried away much oftener, and thus increase the chance of

their going when the topsail-clewlines are most wanted, viz., in gales of wind, &c. Much of the purchase of the whip and pendant is lost by its liability to take turns in the whip. The casualty of a point now and then getting into the clewline-blocks in their ascent and descent, is not counterbalanced by the single whip and pendant. While on this subject, we think that ropes of such consequence as the topsail-clewlines, should not be dependent on the same strop with the top-gallant sheets, thereby rendering two sails liable to accidents at the same time. Two single blocks on each side of the topsail-yards should be fitted, each with separate strops, and entirely independent of each other; one on each side for the clewlines, and the other for the top-gallant sheets. This will make the topsails and top-gallant sails quite independent of each other, as far as the quarter-blocks are concerned. I cannot see what difficulty there could be in making a block that would keep out the points of the topsail while setting, or taking them in. It appears to me, that blocks like the clew-garnet blocks, which are allowed for the courses, might be made to answer very well, with little alterations.

On using the word port instead of larboard.

The introduction of the word port, instead of larboard by the authority of the Admiralty, will no doubt be beneficial to the service. I have for several years tried both, and found that in narrow waters, or going in or out of port, or whenever the yards required to be quickly braced one way or the other from the two sides of the ship, ending inboard, starboard, and larboard, the men never appeared to catch the word as quickly as starboard and port.

In turning the two watches up, each to do different things, previous to using the word port, I have continually heard the men inquire, which watch was to be employed here, and which there. It always struck me that "board" was the stumbling

block. The word, though not sanctioned by the Admiralty until lately, has, to my knowledge, been in use nearly twenty years, and in some of the best disciplined ships in the Navy. Those who advocate the word larboard, say that we ought not to use the word port for any other purpose but the helm; however, we have had a pretty fair trial of the use of this word for general purposes, and I never saw or heard of a single accident having taken place from the general use of the word port. Previous to its general use, it was always used for squaring yards as well as the helm. I was senior lieutenant of a ship in which we used the word port nearly twenty years since. One of the gun-room officers had a great objection to the word port being substituted for larboard. As this officer was a very well informed person, I was most anxious to know his objections, thinking he might throw some light on the subject. I pressed him rather hard for his reasons, when to my astonishment, he told me, he disliked it because it spoilt all the sea songs he had been accustomed to sing, in none of which was the word port mentioned.

In pilot water, holy-stoning, washing, or cleaning decks before daylight.

The loss, or endangering of some of Her Majesty's vessels, it is to be feared, may be attributed to the over-anxiety of many officers to have clean and white decks when going into port; and as this object in some ships, is made to outweigh the consideration of the vicinity of land, rocks, shoals, &c., a time when every rope ought to be coiled down clear for running, and the watch kept continually on the move, instead of which ropes are coiled up, and decks often holy-stoned under such circumstances, before daylight. No ship when washing decks can be so ready to perform any sudden evolution that may be required, with her ropes traced up, buckets, brooms,

holy-stones; and if you add to this, in the hurry of throwing down the ropes, the chance of a few tracing beckets being left on the running ropes, by which blocks may be choked, and yards stopped in their bracing, or sails retarded in setting, or taking in, &c. With the above, and numerous other reasons that might be given, it does not appear right to risk any of Her Majesty's vessels, for the sake of her upper deck losing its usual whiteness for one or more days. The evil does not always rest here, for the attention of the officer of the watch is more often taken up with the decks, than the situation of the ship ought to justify. On such occasions, we have known the pilot to be asked to wait until the sand was washed off the decks, or until they were swabbed, or ropes coiled down, before complying with the pilot's wishes. In this way, the safety of the ship often gives way to such trifles, that is, when the pilot is not a firm-minded man and afraid to say "no," when he ought to do so. In this way, the lead, tacking, &c. are often deferred until the ship gets into danger, then all is confusion and hurry, because nothing is prepared. When the captain and the master are satisfied with the abilities of the pilot, the quicker his orders can be attended to, the better it will be for the Service. The pilot should never allow his commands to be deferred for an instant when danger is near, without the captain's knowledge. Washing the upper-deck in narrow pilot water, cannot be considered a safe thing, neither is it giving a fair chance to the officer in charge of the deck, or the pilot. Even in broad daylight, vessels have often been much endangered from the bad habit of deferring to execute the pilot's commands immediately.

Close Reefing, or furling topsails, with the assistance of topmast studding-sail halliards.

How often do seamen experience the difficulty of close reefing, or furling square-sails in a gale of wind, although the yards may have been laid in the best possible manner, and the gear well hauled up. To make the topsails much easier to reef or furl to the men on the yards, I wish to propose, that before close reefing, or furling topsails in blowing weather, that two strong tail single blocks should be lashed close down to the tye-blocks on the topsail-yard or yards; then unreeve the topmast studding-sail halliards from the yard-arms, reeve them through the blocks you have just made fast to the tye-blocks; from thence take them before the topsail or topsails, and make them well fast to the lower bowline cringles: when you wish to close reef, or furl the topsails, man your studding-sail halliards with a few hands to keep a strain on them as you haul up your topsail-clewlines and buntlines: when your clewlines are up, confine the fore part of the sail just as you wish. If the sail should be set close reefed, and you wish to furl it in the manner I have described, it will be so brailed up that the men will only have to pass their gaskets.

Reefing topsails.

This evolution requires different management in almost every reef you take in, that is, if you reef the topsails from the changes of weather. The first reef you may take in by only laying the topsail-yards well for the men to lie out; reef tackles and buntlines sufficiently out and taut. Second reef; if it blow fresh, it will be mostly desirable to clew up the top-gallant sails, or the men will get some clumsy thumps with the top-gallant sheets, and if hauled taut, they are in the way of tying the points. Third reef; if close hauled, you must check

your lower braces, or start the topsail-sheets before you can get your reef-tackles well out previous to reefing the topsails. Vessels can seldom carry top-gallant sails when they are obliged to take the third reef in the topsails, therefore the top-gallant sails had better be handed previous, or while the reefs are taking in. In taking in the fourth reef, clew up the topsails at once; get the reef-tackles close out, and buntlines up to the spans, square with the topsail-yards, and steady-to the lee top-bowlines, before allowing a single man to lie out on the yards. In every case of reefing, if the ship have rolling motion, the rolling-tackle should be on the yards previous to the men lying out to reef the sails. In blowing weather, it would add much to the security of the men on the yards, and ease of the ship, if the storm foré-and-aft sails were set previous to reefing topsails. In every case when you reef without clewing your top-gallant sails up, you ought to be mindful of lowering the top-gallant halliards equal to the number of reefs to be taken in, and be most careful in hauling your top-gallant clewlines well taut, for should you omit lowering the halliards, and the top-gallant sheets not render well, or the clewlines not be taut enough to take the strain, the whole resistance will be on the leach-rope of the top-gallant sails, and top-gallant yards. Top-gallant sails are sometimes split, or top-gallant yards carried away for want of this timely precaution. If the ship is going before the wind, you may take the first and second reefs in in the usual way; but if it blow hard, you had better brace the yards by, so as to spill the sails before hauling your reef-tackles out, and buntlines up; by doing this, you make the sails much easier for the men to reef: for the fourth reef, it will be invariably found the quickest and best way to clew the topsails up, and close reef the sails with the yards braced by. The topmast studding-sail halliards unrove from the yard-arms, and rove through two strong tailed single blocks made fast to the strop of the

tye-blocks on the topsail-yard, and taken down before all, and then made fast to the lower bowline cringles, will be found a most excellent plan in reefing topsails, or furling them in blowing weather, as before mentioned. For a long continuance of blowing weather, such as ships prepare for when they are going round Cape Horn, or in the winter season on a bad weather station, it will make the topsail-yards much easier to work in every way, if the top-gallant studding-sail booms were sent on deck, and life-lines put on the topsail-yards, about a foot off the yard, made fast to the lifts, and set up to the strops of the tye-blocks, will add much to the safety of the men in blowing weather. Reefing-lines on the topsails, under such circumstances, will also be found most useful, as they will much facilitate the reefing and furling of the topsails in blowing weather. Topsail-yards are often carried away while reefing, from the neglect of hauling the topsail-halliards taut, before the word is given to lie out on the yards; in which case, the whole weight of the men is suspended by the lifts, and endangers the carrying away either yards or lifts. Some of the best seamen I have known, have been most particular on this subject, even when the topsail-lifts were fitted to the quarters of the yards. The same thing ought at all times to be observed with the top-gallant yards. All good seamen know how requisite it is when at sea, to keep the yards well off the caps, hence arises the necessity of taut halliards.

To try the relative wear of rope.

If you wish to try how any other rope will wear against the rope in general use in the Navy, it would be well to reeve a fore brace of each of the two kinds of rope to be tried, as the fore braces are generally supposed to be the most equally worked ropes in the ship; they are entirely free from the sudden jerk received by the ropes on the main-mast in tacking, &c., &c. The way I have generally seen canvass tried, is by

taking a cloth out of a new sail, and putting one, of the canvass to be tried, in its place, so as to wear it equally with the other parts of the sail, when set.

To prevent rope from chafing on a rocky bottom.

We will suppose, in this instance, the rope to be a stream-cable; to the stream-cable bend one length of chain-cable, cackle the bend on the stream-cable a few fathoms upwards, have several well slung casks, with buoy-ropes in proportion to the depth of the water, make one cask fast in about the centre of the cackling, the next about ten fathoms up the cable, and the next about the same distance, the third about fifteen, the fourth about twenty, and so on in proportion to the weight and length of the stream-cable, or hawser to be so laid out; the buoy-ropes should be so managed as to keep the cable well off the rocks: of course the whole would have to be regulated, as to number of casks, and everything else, according to the depth of water, which would shorten or lengthen the quantity of cable to be kept off the rocks, in proportion to its angle. In three or four fathoms water, you would then require many more casks to keep the cable up; which proves, the smaller the angle is, the more difficult it will be to keep the bight of the cable from the rocks, therefore, you must give each cask less cable to support, so as to insure its being well off the rocky bottom. A friend of mine, a captain in the Navy, told me, he was once obliged to anchor with a rope-cable in this manner, and it answered well without the least chafe.

Setting up lower rigging, with rolling motion.

If you are obliged to set up rigging when the ship has rolling motion, after you have stayed your masts, if they should require it, you should set up your rigging by pairs, never

slacking the second pair of shrouds, until the first pair are secured, and so on, but of course, all in proportion to the rolling motion: if the ship roll much, and you cannot help setting the rigging up, top-gallant yards, masts, and all unnecessary weights had better be sent on deck, and tackles put on all the shrouds on one mast, at the same time, having good salvagee nippers and heavers ready for the laniards of each shroud, to assist the racking in bringing-to and securing, minding to take the measure between each dead-eye; bring-to your laniards, keeping the bight of the laniard fast round the shroud, but still quite clear for hauling taut the tackles together; when the slack of all the tackles are in, slip the bights of the laniards together, and when every tackle has a taut, heavy, and equal strain, and the ship the least rolling motion, cast off or cut all the rackings together, and pull up every shroud at the same time, attending particularly to the marks for each shroud; when your rigging is sufficiently taut and marks right, rack and secure the laniards in every possible manner. When done, come up the foremost half of the laniards on each side together, then secure them; when done, do the same to the other half. Then, when all is well secured, take the next mast and do the same. I have every reason to believe, that under all circumstances, it would be advisable to set up the shrouds by pairs, as by so doing, you would stand a better chance of making the eyes of the rigging lie fair, and avoid that see-saw on the seizings of the eyes of the rigging. I have generally seen the best seamen set up rigging by pairs of shrouds. It is certainly a much quicker way, and in my humble opinion a more seamanlike manner of doing it. If you are obliged to turn in your rigging afresh under the above circumstances, do not on any account come up above half your rigging on either mast at the same time; and when the first half is ready, you had better set up all the newly turned in shrouds together, one mast at a time, or as you think best,

according to circumstances. When you have secured your newly turned in shrouds, then cast off and turn in, in pairs, or altogether, as you think proper.

On standing rigging in tropical climates.

It is a well known fact in the properties of rope, that in hot and dry weather, rope lessens in diameter, and increases in length; and that in wet or cold weather, it increases in diameter, and consequently shortens in length, therefore, as ships in a tropical climate are subject to the extremes of heat and wet, it requires great care in hot dry weather not to set up the rigging over taut, for if it be succeeded by a continuance of rain, you greatly punish your rigging, and endanger your masts, more particularly when ships are detained in port during the rainy season, or hurricane months. If you should have set up your rigging over taut, and it is evident that you will have a continuance of rainy weather, it will be advisable to come up the laniards of the shrouds. I was first lieutenant of H. M. S. *Jaseur*, during two hurricane seasons, at the Isle of France, and saw several vessels suffer considerably in the standing rigging, tops, and spars, from the want of this precaution. While on the subject of rigging, I wish to mention a practice not uncommon when setting up topmast-rigging at sea, which is, getting the weather topmast-rigging too taut, with the intention of getting the topmast-head over to windward; this is called supporting the mast well for a good breeze. This is done without reflecting, that if the mast-head is much over to windward, there must be a curve or belly somewhere to leeward in the mast, and that place will most likely be in the way of the second reef, consequently, when carrying on double-reefed topsails, your topmast will be more likely to be carried away than if your masts were upright, and should you tack with your masts in this state, it would still be in a very unsafe position. It has always appeared to me, that keeping

the masts as upright as possible is the best position for carrying sail. I have seen top-gallant masts carried away several times, from bringing the mast-head too much over to windward, when carrying sail. The jib-boom is another instance of the kind I have above stated. You now generally see the jib-boom curved from the bowsprit-cap to the boom-end; I must confess, I like it much, because I think it adds to the appearance of a vessel, if not too much curved; and while the weather will admit of the jib being carried at the boom-end, perhaps it may be equally strong, but if you ease the jib any distance in, or even though you may have a travelling martingale and guys, it will not be equally strong with a jib-boom, more straight, and equally supported. The curved jib-boom, and the topmast head being much over to windward are pretty nearly alike, the topmast when the topsail is double-reefed, and the jib when set, eased in on the boom.

On turning in standing rigging in the winter.

Every officer who has had to fit out a vessel in this country during the winter season, must have experienced the difficulty of turning in rigging when once over the mast-head, with the usual weather at that time of the year, such as frost, snow, sleet, rain, piercing winds, and many other *et ceteras*. We have seen vessels turning in the rigging during this season of the year, when the men could hardly hold their marline-spikes for above a few minutes together, without beating their hands to endeavour to make them warm. When the rigging is turned in under the above circumstances, it will generally require turning in afresh, as soon as you can get fine warm weather for that purpose: the seizings take up so much with cold or wet, that they are sure to give out with warm weather. I am strongly of opinion, that the standing rigging, with very few exceptions, might be fitted in the rigging loft. If you take the angles of the masts for stays and shrouds, in the way

in which you wish the mast to stand, and have the diameter of the shrouds, I cannot see the difficulty of turning the rigging in at the rigging loft, previous to putting it over the mast-heads. This would save much time, labour, and expense, and the rigging would be considerably more secure. If the rigging for the advanced ships were kept ready turned in, bowsprits gammoned, and secured from the weather, port pendants fitted, and tackles rove, it would be a great saving of time if these ships were required in great haste. To have the bowsprit ready gammoned, if a ship be required expeditiously, every seaman knows must be of the first consequence; in fact, nothing can be in its place on the fore-mast until this is done. You may get your fore-rigging over the mast-head, but nothing can be secured until the gammoning is finished. When the *Rodney* fitted out *Bellerophon* in 1846, she would have been much sooner ready had the gammoning of the bowsprit not detained the fore-mast considerably. If an advanced ship is required to be ready quickly, it would be better if the carpenters could have the ports previously fitted to receive the guns, as every person not actually employed in preparing a ship for sea must, in some degree, be in the way of each other. While on this subject of turning in rigging, let me observe, that whenever you are anxious to turn in all your rigging afresh, and set it up quickly, the greatest difficulty you have, is in procuring seamen enough to get all your work in hand at the same time, for, though your crew may be that of a ship of the line, where your rigging bears no proportion to the number of men, still, I believe I am right in asserting, that you can seldom find seamen enough to undertake to turn in all your rigging well at the same time. The merchant docks have much curtailed our nursery for seamen, as the ships which generally sail out of London, Liverpool, Bristol, &c., are seldom fitted out by the men who take the ships from port to port; these men generally know very little of the seamanlike

part of their duty, and really it is not their fault, for the moment the ship arrives near the docks, they are either sent on shore soon after the sails are furled, or immediately on the ship's arrival in the docks. Where there are docks, generally speaking, the seamen who rig the ships do not go to sea in them, therefore, this must have the effect of confining seamanship to a much smaller number of men. The best men for the Navy are those who have been brought up from boys in the Service. If an old hulk could be spared at each of the principal ports, with jury rigged masts, for the newly raised boys to be exercised in all the duties of a seaman, as this cannot well be done on board a stationary guard-ship (which must always be more or less a show-ship), where visitors, tar, and rigging, would not agree very well together. The exercise of guns and sails should each have its turn. Whenever the day of need comes, seamanship and gunnery must go hand in hand. If more attention could be given to instruct the boys in seamanship, it would be of the greatest consequence to the Navy.* The Army has its depôts to make soldiers, which seldom takes above a few months; but in the Navy, where it requires years to make a seaman, we have no previous teaching; for when youngsters go on board vessels of war, things are generally expected to be done too quickly, for them to have a fair opportunity of learning. The boys in the Navy should, in a great degree, be considered the rising generation of seamen for men-of-war, as those brought up in the Service are the most likely to continue in it. Allowing the opinion of the petty officers to have some weight in the rating of the younger part of the crew and boys, has the effect of raising the position of the petty officers in the eyes of the crew, and

* This article was written previous to the present admirable arrangements of the Admiralty, for bringing up a fine set of boys as seamen for the Navy, by giving them every facility for acquiring a knowledge of seamanship, in all its branches, &c. &c.

making those under them more attentive, and more anxious to learn. Suppose you have six or eight vacancies for seamen, and you wish to bring six or eight smart lads forward for top-men, or other ratings you wish to advance from ordinary to able; the day you muster the crew by the open list, let all the executive working petty officers attend on the opposite side of the deck to the officers, and as the crew pass, desire the petty officers of any part of the ship you may wish to give a vacancy to, to tell you conscientiously, which man or boy in his part of the ship, he considers the most deserving of being advanced from ordinary seaman to able, or from boy to ordinary seaman; and should any be found sufficiently active, and zealous, to do the duty of an able seaman, advance him at once to that rank, which cannot fail to have the best effect in stimulating others. I have seen that part relative to taking the opinion of the petty officers tried, and it answered very well.

Covering the eyes of rigging.

This is sometimes done for neatness, but cannot be considered desirable, as the canvass will seldom stretch in proportion to the rope, consequently, after the rigging has been well set up two or three times, the canvass will be liable to break in several places round the eyes of the rigging, and admit the wet into the rope. If the eyes of the rigging are covered with the intention of making them lie close down on the mast-head, to ensure a neat appearance when the spun-yarn is taken off for neatness, it will be most likely that the parcelling will also be removed for the same purpose, consequently, when the wet once gets through the breaks in the canvass, it must inevitably get into the rope and rot it. It cannot be worth endangering the rigging for the sake of having the eyes of the rigging a few inches lower on the mast-heads. The parcelling on the eyes of the rigging is so beautifully placed for

turning the water off from the rope, that it will be difficult to find a nearer, or a better comparison to it, than the slating on the top of a house. While on this subject, top-gallant masts are often endangered, from an over-anxiety to make the mast-heads look neat. This is done by passing both pair of shrouds athwartships, and seizing them together; this only makes one eye for each two pair of top-gallant shrouds; but the whole weight of the mast when carrying sail, must press on the seizings, therefore very insecure and dangerous.

Rattling the rigging.

It is a very common expression to say, "rattling the rigging down;" but in reality, the rigging should always be rattled upwards; for if rattled downwards, whatever the rattlings may be out of the line on either side, will show very much near the deck: but if rattled upwards, it will not be noticed so high aloft. The dropping of the line of the ratlines abaft, arises from the men measuring on the shroud; and as the foremost shroud is perpendicular, and the after shrouds upon a large angle, the most certain way would be to hold the distance-stick upright from the ratline, till the head touched the after shroud, which would ensure all the ratlines being parallel to each other.

Scudding.

There is a point beyond which no vessel can scud without the greatest possible danger; of course much will depend on the size and height of the vessel out of the water, but I have never heard a dissenting voice as to flush vessels being by far the most dangerous while scudding in heavy weather. What I wish to observe is, that you should bring your ship to the wind while it can be effected without the greatest risk to ship and lives. If night is coming on, and the weather has every appearance of an increasing gale, with a falling barometer, and circumstances will admit, it would be advisable to lie the ship by the wind. In scudding, the tiller-ropes are constantly doing double duty; and though the relieving tackles are hooked, you cannot steer the ship with that nicety that you can with the wheel. Should the tiller-ropes unfortunately be carried away, the risk of broaching the ship to, is then considerably augmented; and if to this you add the increased difficulty of the management of a ship on a dark night, and a heavy gale of wind, with all these things considered, I do really think it would be right to bring a ship to the wind previous to night setting in, when you are doubtful about the effect scudding may have on the ship. Sometimes, unavoidably in scudding, you are obliged to carry your fore-topsail and foresail; when that happens, it may arise from some accident received to the spars or rigging on the centre masts, in which case it is generally considered advisable by good seamen to make the fore-topsail, and foresail rather rising sails, by easing off the sheets until they have that tendency. Of course, when all things are right on the mainmast, the maintopsail and foresail are the best sails for scudding under, while the ship will carry them. It is generally considered best that the foresail should rather raise the bow than have the contrary effect, more particularly in sharp vessels.

Unbending sails in blowing weather.

Previous to the order being given to unbend sails, let every man stationed on the yards be provided with a sail-tye, or a length of spun-yarn, sufficiently long to go twice round the sails. Every man takes his stop aloft, and when he has seen his robins clear, he then passes his stop twice round the sail, keeping his yard-gaskets fast until the sail is quite ready for easing in. Sails may be unbent in this manner without danger almost in any weather. If from some unavoidable circumstance you have painted ship, or black rigging, this will be a very good way to save both sails and paint.

Staysails.

These sails, though very little thought of in the Navy (generally), are often of most essential service. We will suppose two vessels going up a narrow channel, one under square sails, and the other under fore-and-aft sails, a flaw of wind comes right ahead, they are both obliged to anchor, the ship with square sails set, would stand a great chance of being driven on shore before she could furl her square sails; while the ship with the fore-and-aft sails, would hardly feel the wind, from her sails holding so little when head to it, and from their being so soon hauled down out of the way, compared with the square sails.

Sudden shifting squalls.

When you have plenty of sea-room, in sudden and shifting squalls, it is generally considered best to furl all sails, and hoist the fore-topmast staysail, or some head-sail in proportion to the strength of the squalls. By this means, you keep your sails, spars, &c., from being split and carried away, and your men from danger, and wet clothes; as in these squalls you generally have thunder, lightning, and heavy rain.

Ship on shore with the wind free, or right aft, in moderate weather.

Furl all sails, hoist the boom boats out, run the stream anchor out in the best direction you can, and as near right astern as the deep water will admit, and endeavour to lay out the whole cable as taut as it will well bear. If the tide is rising, there will be every chance of your soon running her up to her anchor; and while so doing, the slack of the stream-cable should be hauled through the spare hawse-hole, ready to cast and make sail from it, should you have room for so doing; but it frequently happens, under these circumstances, that you are obliged to warp two or three cable lengths off shore before you can make sail. When you have a sufficient offing, in-boats, and make sail for casting up anchor, &c.

Ship on shore, nearly on the top of high tide, night approaching, barometer falling, and every appearance of squally weather, wind on the land.

This is a case in which the energies of every man in the ship must be put in full force to get off quickly. Send a boat away to sound for the best direction to heave off, hoist out the boom-boats, and lay out the stream-anchor in that direction. Sound round the ship to see if she hang equally fore-and-aft; if so, and you have got the greatest possible strain on the stream-cable, and not the slightest signs of her starting by the leads or marks on the land, your situation becomes critical, and you have not one moment to lose. The captain must decide immediately of what heavy weights he will lighten the ship; starting water, to be governed by the distance to the nearest port. I think it would be advisable to decide on throwing as many guns overboard as you think would lighten her sufficiently and quickly, being careful to have a good strong buoy-rope, and good buoy to each gun. Lower all the

boats down; then try her again, and if she is not very hard on, there will be little doubt but you will soon heave her off to her anchor. The ship should then be warped sufficiently from off the shore; then make everything snug for keeping the sea, or anchoring, with the intention of weighing your guns when the weather comes fine. I do not advocate throwing guns or anchors overboard, except in extreme cases, and not then, except you have every chance of getting the ship off clear of them; or when you do it to allow the ship to go higher up on the beach to save the lives of the crew in the last extremity. It is the general opinion of our best officers that many ships have been lost through striking on their guns or anchors; when so situated, therefore, the greatest care should be taken, as to the circumstances, before guns or anchors are thrown overboard. Of course, I suppose the cross-bearings to have been taken, and all marks noted for weighing the guns the moment the weather becomes fine. I think it would be preferable to buoy the guns with spars instead of small casks, and that the buoy-ropes should be made of the best ropes, such as a lower shroud-hawser. Great care should be taken never to lighten the ship with the wind on the land, until you have a good strain on the cable, for as she will only forge farther ahead as you lighten the ship, you only increase the difficulty of heaving her off.

Ship on shore on a beach, without the slightest chance of saving her, wind on the land blowing hard.

Your ship is so situated, that your only anxiety is to get her higher up on the beach, to endeavour to save the lives of the crew; to do this, you must lighten her in every possible way, by throwing guns, anchors, shot, starting and pumping out water, &c. If you think your boats will live on the water, hoist them out previous to cutting away the masts. Before cutting away the masts, give most particular directions that

the lower shrouds are to be kept fast on the side on which you wish the masts to fall, to ensure their doing so. To the lower masts, and to every spar, however small, attach a rope, if possible, in proportion to its size. These spars will be found of the greatest use in floating the vessel up the beach, and of the greatest consequence in case they should be wanted to save the lives of the crew. By these means the ship will have been thrown well up on the beach, and the chance of saving the lives of the crew very much increased.

Ship on shore by the wind.

Heave all sail flat aback; see two careful hands in the chains to watch her movements. If the ship is on a sandy bottom, and fine weather, with little or no tide, you will frequently be able to get her off in the following manner. Let each man take a shot in his hand; when they are all quite ready, let them form a line or lines, on one side of the upper deck; then let them sally from side to side together, by word or boatswain's pipe; the ship's rolling motion will then make a dock for herself, out of which, with all sail flat aback, she will frequently back off. Of course, if the boom-boats were out, your men would then have a much better chance for sallying the ship, and at the same time they would be ready to lay out an anchor, if required. When a ship is aground by the keel in little less water than her draught, you have every chance of getting her off, by heaving all aback, running all the weather guns in, and sending all hands on the opposite side; this inclines the vessel on her side, and tends to lift the keel, from her drawing in that position less water than when upright.

Ship on shore on a falling tide, no chance of getting her off until high tide, with weather fine.

Out boom-boats; lay your stream-cable out in what you

consider the best direction. Keep your yards and stays up, with which hoist out your spare topmasts and other spars, and commence shoring the ship up as fast as possible, as she will be left high and dry at dead-low water; as soon as the ship is well shored up, and spars lashed and cleated, ship all the ports, and see them properly secured. As you are sure of getting her off on the top of high water, make every preparation for hauling her off, stowing booms, boats, &c., &c. But should the ship be so placed on a rocky or coral bottom, her safety will so much depend on keeping her on an even keel, that not a moment ought to be lost in shoring the ship up. Besides the spars from the booms, take as many as requisite from aloft (the lower yards are very handy on such occasions, canting one over on each side). Send on deck, and strike all weights from aloft. Run all the guns into a taut breeching. Remove all weight about the decks from the sides to the centre of the ship, and lash them well. The finer the ship's bottom is, the greater care it will require to shore her exactly upright, and more dangerous will be her fall should the shores give way; therefore, nothing should be left aloft that can possibly be sent on deck, for should the ship unavoidably have the slightest heel to either side, the weight of the spars aloft, from their high position, would add much to the strain on the shores, on the heeling side. When a sharp ship is on shore, in a little less water than she draws, and not affected by tides, she will be in less danger of hurting herself, than a round or full bottomed ship; that is, if the ground be rocky, and both vessels equally strong. If the sharp ship can be kept upright, her bottom will be less likely to strike the ground, and if she heel over to either side, she will be in a much better position than the round or full bottomed ship, and much easier got off, from taking the ground in fewer places, consequently, less friction while hauling off. If a full bottomed ship, and a sharp bottomed ship were to

get on shore together, on a rugged shore, if both ships could be kept upright, the sharp ship would stand the best chance, as she would rest on her keel, while the full ship would be more in danger of resting on her keel and bottom at the same time; and if we suppose the two ships to be considerably heeled on the same shoal, and striking hard, the full bottomed ship will be in great danger of bilging, while the sharp ship's lee-side will be water borne, and the ship striking on her keel. But take the water entirely away from both ships, the full ship will then be nearly upright, when the sharp ship is lying on her beam-ends. If the above two ships were to get on shore on a hard, but not a dangerous bottom, and let the water leave them without being shored up, then the full ship would be left nearly upright without being hurt: but the situation of the sharp ship would be liable to much danger, as she would most likely fall over on her beam. This is a very critical position for even a strong new ship to be placed in, but extremely dangerous for an old one: but if you add to this a rocky bottom, and the ship left high and dry by the tide, falling over on her beam-ends becomes inevitable; few ships will bear this, even without gales of wind, and heavy seas to help to destroy them. We have seen many strong proofs, that as long as a sharp ship is water borne, that she will strike on her strongest part, namely, her keel, whereas the full built ship will be likely to strike on her bottom and keel together, consequently, more liable to hurt herself while striking the ground. We have merely drawn attention to this subject, to show how particularly necessary it is to shore ships of war up, as they are generally sharp ships, therefore, ought to be shored up immediately, if there should be the least chance at any time of the water leaving them high and dry, or nearly so.

Shifting a topsail while the other sail is still set.

If, in chasing off the wind, you have any reason to doubt the strength of either of your topsails, from being much worn,

or from having split in shaking a reef out, or otherwise, you had better shift it at once, as the chase may try you by the wind. This evolution can only be practised when the ship is going free, with any benefit to her speed. It has been done by some good officers in the following manner:—we will suppose the fore-topsail the one to be shifted: middle the sail to be bent, across the fore-stays, stopper the clews of the topsail, unbend the fore-topsail sheets and buntlines, have good burtons on the fore-topsail yard-arms, and well boused taut. If neither of your fore-topmast studding-sails are set, overhaul the halliards down, and bend them on to the first reef cringles, the head earrings should be made fast to the topmast studding-sail halliards, or whips used for that purpose, as you do to the yard-ropes in bending a course. Send a light burton down before the topsail, and hook it in the centre of the head of the topsail, single your topsail-sheets, and bend them to the clews of the spare sail, bend your buntlines to the proper places on the foot of the sail, but do not make fast the robins to them, bend the fore top-gallant bowlines to the head of the topsail by the robins, about half way out on the head of the sail, so as to keep the sail going up clear of the points of the one bent; when all is quite ready, man everything together, and send the sail up as a flying sail; be careful to get a good pull of the reef-tackles, before the men lay out on the yard to unbend and bend sails. It will require the greatest care in displacing the earring of one sail, and placing the earring of the other: when your robins are fast, you may let the old sail hang by the reef-tackles, then run your clewlines up high enough for sending the sail on deck, with the help of the burton at the mast-head, which must be shifted abaft the topsail-yard for so doing.

Topmast-stay shot, or carried away.

If you are obliged to run a hawser up to secure a topmast,

do not allow it to be made fast round the topmast-head, as you will then find great difficulty in striking or fidding the top-gallant-mast, and perhaps not able to do it without slacking your temporary stay; the hawser should be taken round the topmast-head, then made fast so as to leave a collar for the top-gallant-mast to go up or down through. A bowline knot is considered a very good way of making the collar of your temporary stay, securing the end well on the side of the collar on which it is bent.

Making sail from a spring on the cable.

When I was in New Plymouth, New Zealand, one morning about an hour before daylight, we heard distress guns fired in quick succession. I had, from my first taking charge of the Settlement, established a rule, that the moment a gun was fired from our two-gun battery at the store-house, that every working man should assemble at a particular point to receive my directions, therefore, her guns were soon answered, and our men on the beach as quickly as possible: with much difficulty we got about forty men on board of the ship in two boats, when we found that she had dragged her anchors, the stock and one of the flukes of one anchor being broken, but the other was holding her well. It was blowing too hard to attempt to warp her off shore, and the ship was too near the rocks to make sail from, therefore, between the squalls, we agreed to try the following plan:—with the stream-cable, we made a spring from aft on the port side, to the riding cable; a sufficient number of men were sent aloft to have the double-reefed topsails, and the courses ready for letting fall at a moment's warning; the topsail-sheets and halliards were all well manned, and taut for a run; the spring was hauled taut, and secured to the main-mast; the yards were all laid perfectly square, the cable was then veered gently (during one of the greatest lulls) until the wind was right on the port beam, the

riding cable was then instantly well stoppered, and ready for slipping with the damaged cable of the anchor, and at the same instant for cutting the stream-cable; at this moment the topsails were sheeted home, and hoisted at the same time, and from the wind being right abeam, and the yards square, of course little or no increased strain was brought on the spring or bower-cable; when the topsails were up, braces, tacks, and sheets, driver out-hauler, and jib-halliards all well manned, the preparative word given to insure everything being taut, the next minute the yards were braced sharp up, and topsails, courses, jib, and driver all well set: by this means, we insured the ship getting way previous to slipping the cables, and cutting the spring when the ship had sheered her cables taut, and brought her head within about seven points of the wind, consequently, she had felt and sprung to her canvass: the bower-cables were then slipped, and the stream-cable cut at the same instant, in less than ten minutes she was tacked, and in about two hours worked completely out of danger. In this manner, was a most beautiful merchant ship of about 600 tons, saved to this great commercial country.

Scrubbing sails.

In a tropical climate, I invariably found it a good thing to scrub all new sails previous to bending them, as it made them less liable to mildew during the hot rainy weather you so frequently have in these climates: by this means, you save your sails, and make them much easier for the men to handle.

Making sail from a spring laid out by another vessel.

On one occasion, in 1831, in order to save a French merchant brig from being inevitably wrecked, Capt. Harding ventured to anchor the *Jaseur* in the narrow and dangerous pass of Tamatave (Madagascar), in very squally and unsettled

weather; we dropped the anchor in the brig's hawse, about a cable and a half to windward, and immediately veered to about 70 or 80 fathoms of cable; at the same time, without the least delay, we ran the end of the stream-cable out to her, and a lieutenant was sent with all the boats to her assistance. On getting on board he found, from the short and broken sea then running, that it would be impossible to heave the vessel ahead without great risk to both vessels; under these circumstances, and feeling that the captain had entrusted him with this charge, that he might act according to the best of his judgment, he took the following method:—he made a spring of the *Jaseur's* stream-cable on the port side, all the yards were braced up for the port tack, the pinnace was made fast to the stream-cable, a sufficient number of men sent aloft to have the topsails and courses ready to let fall at a moment's notice; when everything was quite ready for cutting the cable and spring, and making sail at the same time, the spring was then tautened, so as to bring the wind well on the port bow; the moment she had sheared sufficiently for the sails to stand well, all sail was set together, and the moment she felt her canvass, the cable and spring were cut at the same instant. The result I will give you in Capt. Harding's own words.—"As she was cast to seaward, the press of canvass she was under appeared to bury her in the very surf, but she was lifted, gathered way, and just grazed clear of the reef," to our astonishment, and my great relief; for had she struck, not only the brig, but the lives of those on board must have been lost. On the return of the *Jaseur* to Port Louis, the owners and masters of the brig waited on Capt. Harding, to acknowledge that this vessel had been saved by the exertions of the officers and crew of the *Jaseur*.

Taking in top-gallant sails.

In taking in top-gallant sails, the reason for keeping

the weather sheets fast, is, first to insure the top-gallant yards coming down quickly, so as not to endanger the mast, or lee-rigging, therefore, the weather top-gallant sheets should always be kept fast until the yards are down: the second is, if both sheets were let go together, the sail would frequently get over the lee yard-arm, and therefore endanger the splitting of the sails. In taking in top-gallant sails before the wind, in anything above a moderate breeze, both sheets should be kept fast until the yards are down, which will relieve the mast-head immediately; but should the sheets be let fly, and the yard hang at the mast-head, in the least, you will endanger your top-gallant masts with the sudden jerk which it will occasion.

Taking in square-sails by the wind.

I have continually tried, with weather and lee clewlines, in taking in square-sails when blowing hard, and for several years felt confident there was nothing like taking in a sail by the weather clew; however, I found this method liable to several objections; in the first place, you are more likely to get the sail over the lee yard-arm; secondly, if your weather brace should be carried away in taking in a topsail, your lee rigging would be much endangered. In hauling the lee clewline up first, you have rather a heavier, but a more steady strain, than when you haul the weather clew up first; with the weather clew, the sail is kept longer shaking, and jerks more, in consequence of which, you try the yard, block-strops, and braces more. I have often tried manning all the gear together, then keeping the ship a few points off the wind, and when everything was quite ready, run all the gear quickly up together. I found this plan answer very well, but you cannot do it without plenty of hands. By this way of taking in a sail, every part of the gear bears its proper strain; at the same time the sail is less exposed to the wind, from being taken in, in less

than half the time that you can possibly do it by taking in one clew at a time, and I am inclined to think, with less risk to sail and rope. As hauling up the lee or weather clew of a sail first, is a point on which many of our best seamen differ, I have, therefore, only stated the result of my own humble experience on this point.

Note.—In writing the other day to one of our first-rate seamen (a captain in the Navy whom I had served under), to ask him if he would kindly give me his reasons for generally taking in a square-sail by the wind when blowing hard, by hauling the lee-clew of the sail up first. His answer I give exactly as I received it.—"Let me first presume, in answer to your queries, that the *lee-sheet* and weather-brace command all square-sails. By easing off the lee-sheet, the sail is neutralized, spilled, and rendered more manageable; likewise the weather-brace is relieved of the strain, which is not the case with the lee-sheet kept fast, and tack let go. In taking in a topsail, I therefore ease off the lee-sheet so far as not to shake the sail, and haul up the lee-clewline and buntline; then, ease off the weather-sheet, and clew all up, attending to the weather-brace to humour the sail; by this means, the sail is taken in with scarcely a shake, and the lee-clewline and buntline being well up before the weather-sheet is started, keep the sail more to windward, and as far as possible prevent it from being *blown through the buntlines*, which invariably happens if the weather-clewline and buntline are hauled up first. I take a course in, in the same way; if the topsail is set over the course, you have not such a command over the weather-brace lest the topsail should be brought aback; but the lee-clew being well up, and a good hold of the sail with the lee-buntline and leech-lines, ease away the tack, and haul up together. If the topsail is not set, humour the sail with the weather-brace, as in the case of a topsail, or top-gallant sail. It is always reckoned bad seamanship, in a gale, to start a tack

with the lee-sheet hauled aft. I saw a line-of-battle ship's main-yard sprung, from the main-tack giving way when under reefed courses. I presume the same thing would have happened, had it been let go. It has always been an object with me, to have the sail manageable after it is clewed up, as well as the safety of the canvass in clewing up. You must often have seen the trouble and annoyance in furling a wet main-sail that has been allowed to blow through the buntlines. In hauling the weather-clew first up, without easing the lee-sheet, the whole pressure of the wind is still on the sail, and nothing can be done with the weather-brace, until the sheet is eased off, and the mischief of the sail being blown to pieces has taken place."

Wearing ship.

This evolution generally takes place from three causes; first, when you have not a sufficiency of wind to tack, the ship will generally wear. Secondly, you are obliged to wear when it blows too hard to tack; and thirdly, you must wear when the ship will not come round against the sea on the weather bow. Many good officers wear their ships instead of tacking, when they have plenty of sea-room, and the nature of the Service will admit. By this means you save your ropes and sails, and endanger your spars less. When you wish to wear quickly, I never could understand why the main-topsail should be shivered, more particularly in light winds, for in shivering the main-topsail you take off the propelling force of the powerful sails on the main-mast; and as it is the ship's way through the water acting on the rudder which is the principal cause of the ship's wearing quickly, you invariably diminish this power by the main-topsail being shivered.

The main-mast of a ship is so near the centre, that I cannot see what you can gain by shivering the main-topsail, still

it is not an uncommon practice to wear ship with the main-topsail shivering. My experience has led me to believe, that the best and quickest mode of wearing is, to heave up the helm gradually, brail up the driver, ease away the after-braces, shiver the mizen-topsail, keep hauling in the weather braces of the yards on the main-mast, but never touch the canvass; when the ship has payed off a point, let go the head-bowlines, ease-off the tack and sheet, and haul on the weather braces, which will make her wear more rapidly than keeping the head-yards up, as is too usually the case, until the ship is before the wind; when the wind gets on the other quarter, haul out the driver, shift over head-sails, heave up gradually, being careful to have trustworthy men stationed at all the weather braces. When short-handed, and blowing hard, and plenty of sea-room, it will be found a good plan to have the head-yards up, and trusses well taut, while the ship is running nearly before the wind; when done, bring the ship to the wind gradually; this gives only one of the principal masts to attend to, at the same time, instead of bringing the ship to the wind with everything flying away, and not half hands enough to attend to them, besides the risk of carrying away yards, splitting sails, &c. Of course when you have the hands on deck, you can attend to all the yards and sails at the same time. In very heavy gales, wearing requires most serious attention in looking out for a smooth. Be careful in having good seamen to attend the weather braces. Good helmsmen, and plenty of them; relieving-tackles, with good steady men to attend them, and a compass ready for use, in the after gun-room, which, by-the-bye, should always be there when the relieving-tackles are hooked.

Setting square-sails in blowing weather.

In setting a topsail by the wind, or with the wind on the weather side, the lee-sheet should be hauled sufficiently home

to steady the lee-clew of the sail, minding to ease the clewline and buntlines, and keeping a steady strain on the lee top-bowline while the sheet is hauling home, thus you prevent the possibility of the sail getting over the lee yard-arm; when the lee-clew is well steadied with the wind, and sheet nearly home, then ease down the weather gear, and haul both sheets home, or square and hoist the sail. I have often ran both sheets home together, by keeping the yards braced up, and running the ship sufficiently off the wind to insure the sail keeping clear of the lee yard-arm; by this method you set your sail much quicker, and thereby less exposed to the wind. I have several times seen topsails set by hauling the weather sheet home first, but I do not consider it so safe to either sail or yard as steadying home the lee-clew of the sail first; by which means the body of the sail remains more quiet, by being blown on to the lee-leach while hauling home the lee-sheet, while the body of the canvass is blown from the weather-leach, and will consequently flap more heavily while hauling home the weather one first. A course should be set in like manner, by first steadying the lee-sheet aft, and then hauling the tack on board. If you have plenty of hands, you may man both sheets and tacks together, being careful to have the lee-clew steadied aft previous to hauling the tack on board.

On trimming the sails.

All sails should be trimmed to stand as taut as possible. The more a sail can be made a flat surface either by or before the wind, the better: the notion that there should be a reef of slack sail to let out when the ship is sailing large, is, I believe, entirely exploded. It is also necessary the sails should be balanced fore-and-aft, that the helm may be carried as nearly in midships as possible. If a ship carry a large proportion of weather-helm, and has all her head-sail set with a side wind—decreasing the after-sail until the ship carries a

few spokes of weather-helm will tend to increase her velocity. When the wind is abaft the beam, the lower and fore-topmast studding-sails are the best sails standing so far out from the ship, and act with a length of lever to pay off the ship's head. Few things will impede a ship's steerage more than weights in her extremes. I was first lieutenant of a ship that stayed and worked well on all occasions except a very short time, when she frequently refused stays, and fell off in her sailing; this led to a thorough examination of every part of the ship, to see where the fault could be. The ship's bottom was examined; the setting of the sails particularly attended to, staying of the masts looked at, stowage of the hold, &c., but all to no purpose; however, before the week was out, we were having a thorough examination of all the case-shot, when to my astonishment I found the gunner getting boxes of case-shot out of his lower store-room; this unravelled the whole affair of the ship working badly, &c. Previous to this, all the spare case-shot had been cleated in midships on the lower-deck. Warrant officers, in those days, were very fond of having what they called their stores, under their own eye; therefore, that was the gunner's answer to me about the shot-boxes. When the shot-boxes were removed from the fore-foot to their proper places, the ship resumed her former good qualities. On another occasion, in the *Cleopatra*, when we left Plymouth about the early part of 1836, for South America, accompanied by the *Comus* for some distance off the port. We were both close-hauled on the starboard tack, and nearly abreast of each other in the early part of the forenoon, but all at once the *Comus* appeared to pass the *Cleopatra* as if at anchor, and continued to do so, until the cause was removed. Being strongly of opinion, that something heavy must have been removed to one of the extremes, I immediately went on the lower-deck, and found as the watch below were securing everything for sea, all the men's bags had been stowed com-

pletely in the bows of the ship; the moment the bags were removed, and the lee-braces a little checked, the *Cleopatra* passed the *Comus* as fast as she had passed us before, and continued to do so, until we lost sight of her about sunset. If you trim a ship by putting weights in her extremes, you not only stand a great chance of impeding her sailing, but you may be sure of making her a very uneasy ship in a sea-way; perhaps even to endangering her masts.

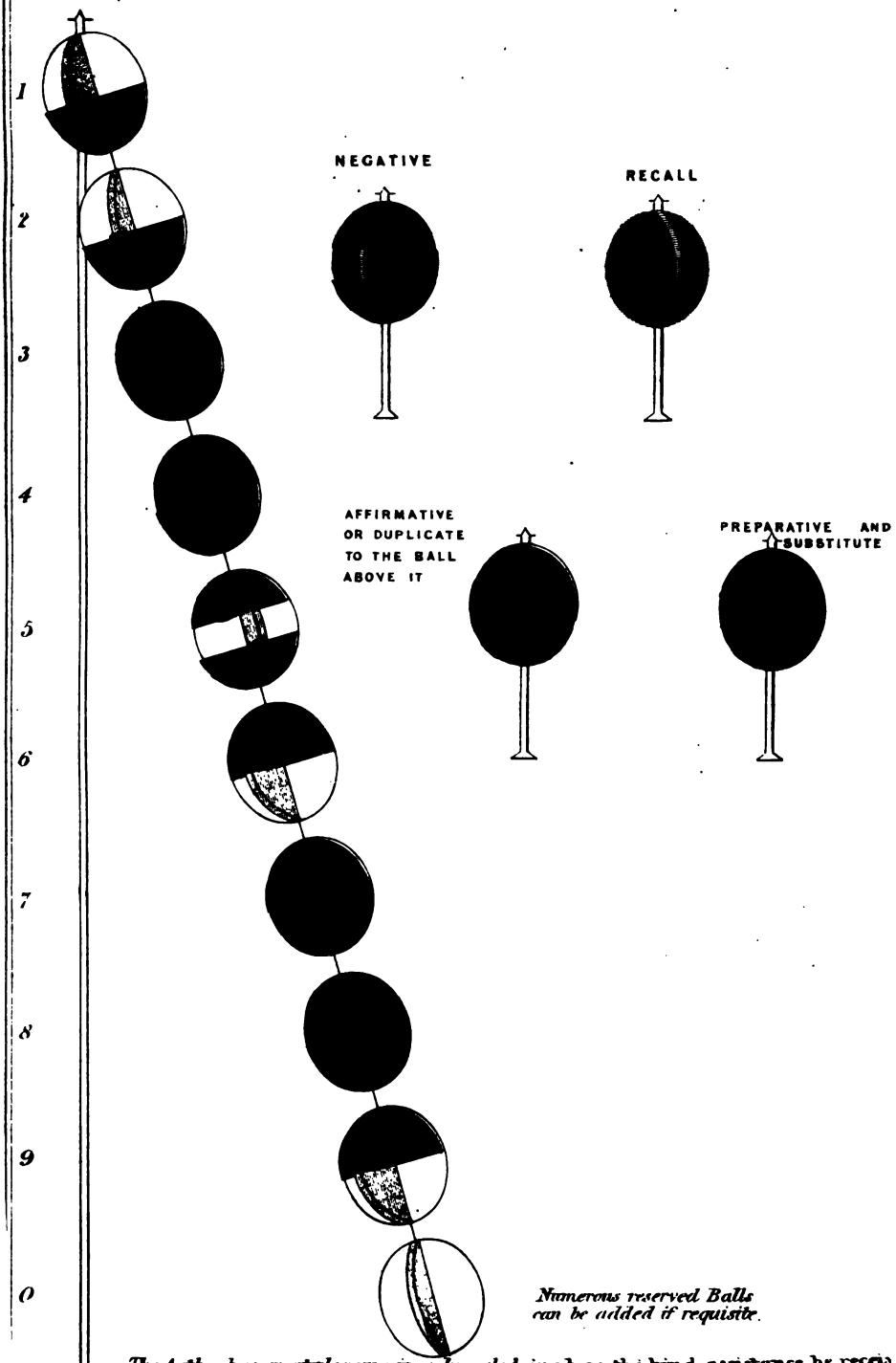
To take in a lower studding-sail, blowing fresh.

Man the inner halliards and tripping line, reeve one of the sheets through a leading block on the main-stay, or fore-mast, about ten feet above the deck, and man it well. When quite ready, trip up the sail, lower the outer halliards, run away with the sheet, hoist quickly up the inner halliards, until you get the sail as much inboard as possible, then lower away the outer halliards, keeping the inner halliards fast till the sail is clear of the nettings. If you can keep the ship away sufficiently to take some of the wind out of the sail, it will much facilitate its being taken in.

Setting topmast studding-sails.

In setting topmast studding-sails in light winds, or when the sails are in motion from other causes, it would be desirable to give the men a better chance of securing themthemselves, by steadying the top bowlines taut for the men to rest against while setting these sails; by so doing, you get your studding-sails set much quicker, and with more safety to the men employed in setting them. I have frequently heard the men on the yards, while setting topmast studding-sails in such weather, obliged to ask the officer of the watch to permit the bowline or bowlines to be hauled taut.

SIGNALS TO BE USED IN CALM WEATHER.



Numerous reserved Balls can be added if requisite.

The Author has great pleasure in acknowledging here, the kind assistance he receiv from Rear Admiral Hyde Parker, in the arrangement of Colours and shape of the Ba
Capt.n Francis Liardet. R.

Dean & Son

in the event of a sailing-fleet and a steam-fleet acting together, that something of this kind will be required. In January, 1846, I proposed the plan here inserted, for Calm Signals, to the Lords of the Admiralty. My proposition was, to prove that when buntin is spread in the manner I here suggest, on wire hoops, each ball consisting of two hoops crossing each other in the centre at right angles, it will always give a ready spread of buntin in proportion to the size of the hoops, so that it can be seen from every direction. It is the transparency of the buntin which enables us to distinguish colours at so great a distance. Painted canvass cannot be made available for signals, except at very short distances, as the colours will mix with each other, from the material not admitting any reflection of light through it. These signals are made with the day-signal book now in use. They have had several trials by the orders of the Lords of the Admiralty, and the reports were generally favorable. My only object in introducing them here, is with the hope that they may fall into some hands that will make them more useful to the Naval Service.

Note.—An oval-shaped ball, under all circumstances, was found to be the best, because, when more than one colour was required in the same ball, there was more room for showing them vertically. When two or more colours are used in the same ball, they should invariably be placed horizontally: for, if placed vertically, should the ball turn round quickly, from turns in the signal-halliards, &c., the colours will not be so easily distinguished. By order of the Lords of the Admiralty, several sets of these ball-signals were made for various trials. The largest sized set was about 3 feet, by 2 feet 6 inches.

See Appendix (Ball Signals), and extracts from Rear-Admiral Hyde Parker's report on these Calm-Signals.

On bending sails.

It is a general practice to set fore-and-aft sails previous to

stowing them, to see that everything is quite clear; this is not so strictly attended to when bending square-sails. Square-sails are too frequently bent and furled immediately, consequently it is chance-work whether all the gear is clear, or not. In ships where this precaution of setting the sails before furling is not attended to when making sail for service, how often is the setting of the sails impeded by the gear being bent foul. It therefore appears that, whenever sails are bent, if the wind is not too strong, or some other good reason, they should always be set before furling; and if unavoidably you are obliged to furl without setting, take the earliest opportunity of doing so, as you cannot put the same dependence on setting your sails quickly without it.

Fore top-gallant and royal stays.

The fore top-gallant and royal stays are generally brought in along the flying and jib-booms, and then set up at the knight-heads; this appears to bring an unnecessary strain on the booms, standing and flying martingales, and heel-lashings. Many good seamen give the preference to having the fore top-gallant and royal stays rove through the dolphin-striker, and with good reason, as by this means you keep your fore top-gallant and royal masts in a better position; but if you have the stays along the booms, as the boom-ends raise, the top-gallant and royal masts go aft. I have seen both ways tried, and always found the masts and booms stand better when the top-gallant and royal stays were rove through the dolphin-striker, and if you wish to fid, or strike your top-gallant mast, you may then be certain that the fore top-gallant and royal stays are not stowed in with the jib, or flying jib-gaskets: as nothing is a greater eye-sore than ropes crossing each other, care should be taken to avoid it, and the royal and top-gallant stays must therefore be rove through the dolphin-striker, below the jib-martingale. When you wish to set the flying-

jib flying, if you reeve the tack through the dolphin-striker, or through a small-tailed block made fast to it, you will be able to carry the sail much longer, than if brought along the booms.

After-swifters on the lower-masts.

It has often occurred to me, that it would be a desirable thing if the after-pair of shrouds on each side of the fore and main-mast, were made of larger rope than the other shrouds; as in heavy pitching, the most of the weight and heavy jerking comes on these shrouds. The frequent carrying away of these shrouds, or their securing in the chains without previous chafe, or damage, led me to pay much attention to them; and the more I have watched the masts in blowing weather (more particularly in a head-sea), I have been convinced that it would add much to their security if the after-pair of shrouds on each side were made of larger rope, and the securings from them made stronger in the chains, and down the ship's sides. If the loss of lower-masts were enquired into, most of them would be proved to have been carried away by first losing the after-shrouds. In reality these shrouds are the after-stays of the lower-masts, and the more they are considered so, the better the masts will be secured. If a stay be carried away, you can generally relieve the mast by putting the ship before the wind immediately, and keeping her so, until the damage is repaired. When swifters are carried away by the wind, and you can tack, do it immediately, and lay the sails to on that mast, and brace the yards by, until the damage is repaired. If the ship is by the wind, and it blows too strong to attempt staying, lay your yards aback on the mast of the damaged swifter; or if the ship be in chase, &c., get up runners and tackles, and secure the mast in the best possible manner, until you can get your spare shroud, or messenger, over.

To shift a bowsprit by the spars of the ship.

*"A variety of opinions prevail as to the most secure and practical mode of shifting a bowsprit; many officers prefer the plan of converting the fore-yard into the form of a derrick. Doubtless, this process is pursued upon the principle of saving time and trouble, but experience will teach the admirers of this method, that the practice is founded in error. To form a derrick of the fore-yard, it becomes necessary to dip the under yard-arm *within* the lower rigging, an operation in itself, attended with no little trouble. Moreover, to obtain a sufficient length of derrick to get in or out a large ship's bowsprit, it will be requisite to lash the *yard* to the mast, in a position approaching the under extremity of the yard, which cannot be deemed of sufficient *strength* to bear the strain† produced by the weight of the bowsprit. The bowsprit of a brig, or of a ship-sloop, may be shifted by means of the fore-yard, but for a frigate, or ship of the line, it is recommended to have recourse to either of the following methods:—

"DERRICK FORMED OF FORE-TOPMAST.—As the fore-topmast should always be *struck* preparatory to shifting a bowsprit, a secure and serviceable derrick may be formed of this spar, after the following method:—lash a top-block close above the hounds of the topmast; through this block, reeve a stout hawser, securing the standing part to the fore-mast-head, and reeving the running part through another block lashed to the lower mast-head. This hawser is intended to act as a top-

* Capt. Glascock's Naval Manual (Page 173).

† An intelligent officer, and one of the first seamen in Her Majesty's service, thus writes to the author:—"I decidedly agree with you; the fore-yard should never be used for the purpose of shifting the bowsprit. Experience supports this opinion, as I have, on board of two large frigates, witnessed the springing of the fore-yard of each ship in attempting the operation. In the second instance (in 1813), the accident delayed for several days, the sailing from the Brazils of a convoy consisting of 300 sail. Need I say more."

and-lift, by which the derrick may be raised or depressed, according to the *angle* required for lifting the bowsprit clear of the bows of the ship. When the upper purchase-blocks are lashed to the topmast-head, the *heel* of the derrick secured below, and its *angular* position obtained, the *messenger*, which should be previously taken up abaft the fore-mast, and passed over *through* the vacant hole in the fore-cap to the topmast-head, must be boused well taut upon deck. The messenger should be passed through a large heart, or thimble, so as to act as a fair leader in taking the strain off the topmast-head, and throwing it more upon the head of the lower mast. Perhaps employing the messenger, upon the same principle that a top-tackle-pendant is rove through the lower yard for getting in the lower-deck guns, will be found to answer best. In this case, the viol-block may be lashed to the hounds of the topmast, so as to take the messenger, and act the part of the fair leader. The main-purchase is then lashed to the eye of the messenger. But it will be always safest to lash the purchase to the *head* of this spar."

"SHEERS FORMED BY TWO TOPMASTS.—This method though perhaps causing a little more trouble, in consequence of having to clear the step of the bowsprit of *two* sticks instead of one, will nevertheless, in large ships, be found to be the safest mode of shifting so heavy a spar as that of a bowsprit of a ship of the line."

"To rig the sheers, proceed thus :—take the fore and main-topmasts, and lash together their heads aloft. Upon each mast-head, lash a top-block, through which reeve two stout hawsers, to answer the purpose of top-and-lifts, led double to the lower mast-head. Take the messenger (as in the preceding method) through the topmast-hole in the lower-cap, and secure it to the sheer's-head. The heel of each top-mast should be previously placed on "strong backs," or stout pieces

of plank, each of which should rest, if possible, on the beams of the forecastle-deck. The beams underneath should be well shored up on the different decks. As soon as the sheers are drooped to the required angle, the heel of each topmast should be well secured by stout lashings passed between two ports, or round the timber-heads in the bulwarks of the forecastle; the messenger and top-and-lifts to be well secured upon deck. The main-purchase-block, in this instance, is to be lashed by a stout lashing to the sheer's-head."

"CAUTION.—In getting in the bowsprit, care must be taken that the main-purchase be overhauled down *abaft* the bumpkin; for should the purchase-fall be passed before and *under* the bumpkin, it will be impossible to lift the bowsprit *higher*. The spar must necessarily be lowered again into the water; the purchase untoggled and shifted abaft the bumpkin, and, in fact, all the work must be done over again."*

When preparing to take out a bowsprit, if you have not another ready to replace it immediately, it will be desirable (as Capt. Glascock very properly observes) to strike the fore-topmast; but in a case of great emergency, with another bowsprit quite ready, fine weather, &c., there cannot be any great risk in taking out a disabled bowsprit, and replacing it with another, if done immediately, by merely sending top-gallant masts on deck, or striking them, &c. If a vessel is likely to be detained for any length of time, with her bowsprit out, it will be more seamanlike to strike both fore and main-topmasts, as all the support you can possibly give to the fore-mast in this situation, is really at so small an angle, that no increased

* "This double trouble, through the obstinacy of a *directing* party, occurred some few years since, on board a frigate moored in Plymouth Sound. The principal *director* was fully warned of the impossibility of his mode of proceeding, but, considering *suggestion* to be synonymous with dictation, he thought proper to persist in error, until error left him in the lurch."

strain ought to be brought on the head of that mast, which must be the case, if the main-topmast is not struck. In the event of blowing weather, or heavy pitching, the fore-mast must be endangered, if the main-topmast remain aloft.

NOTE.—In page 44, under the head of "Shifting a Bowsprit," I perceive, after the article was printed, that I had not sufficiently explained the manner of rigging sheers for the purpose of taking out a bowsprit, and as Captain Glascock has proposed two good methods of rigging sheers for that purpose, I cannot do better than insert them here.

On every ship helping to make her own seamen and riggers.

Though the seafaring men of this country have increased in number, still, men having the real requisites for able seamen, are considerably fewer. The docks in our great commercial seaports, and steamers, &c., are said to have much influence on this change. It arises in a great measure, from the crews of merchant vessels generally having nothing to do with the rigging of their vessels, this being done by riggers, who fit the ship, and conduct her to the port she is to sail from; the crew not joining until within a few days of her sailing, and all discharged again on her arrival; the discharging cargo, and refitting being transferred to the riggers and dock-men; consequently, the seagoing men cannot have the same opportunity of becoming riggers that they formerly had. It is partly on this account, that ships of war so often find great difficulty in obtaining a sufficient number of good seamen-riggers. When anything is to be done with the standing rigging, such as fleeting and turning in the rigging afresh, &c., you can seldom find seamen enough in a ship of war to accomplish the whole at once. It would appear from this, that vessels of war ought to take great pains in rearing seamen for the Navy.

Landsmen, and boys, are seldom taught the substantial part of a seaman's duty; exercising the sails now and then, and a little knotting and splicing will not make a seaman. We have no quiet progressive teaching to make seamen for the Navy; the evolutions of a vessel of war are too quick for a learner to gain much knowledge. Men placed in this situation soon become smart without being useful. If the young men and boys do not get a little instruction in seamanship shortly after they join the Navy, they afterwards become ashamed to learn, and, from being jeered and laughed at by their companions, for not knowing more, they at last consider a seaman's duty above their abilities, despair, and fall into the lowest grade of duties on board. We have seen many such men lose their proper place on board, for the want of a little teaching on first joining the Service. We have also known several men, who have received pensions for long service in the Navy, that could not splice two ends of a piece of inch-rope together. All that I wish to infer is, that the day is fast approaching, when the Navy will, in a great measure, have to look to its own resources for seamen for her fleets, therefore, the more the captain of every ship can do to make the rising generation practical seamen, the better. As this is the point on which we appear so much to fail, not in the want of men to join the Navy, so much as the want of seamen. If that part of a rigger's duty which is so generally found useful, were more taught to the younger men and boys, we should not find ships so much at a loss when they have anything of consequence to do with the standing rigging. We have heard of several vessels being obliged to have their rigging turned in by the dock-yard riggers, for the want of seamen amongst the crews.

On sailing along a coast with high land and deep ravines.

In sailing along a coast of this description, with the wind

off the land, you are always liable to sudden gusts of wind, therefore you cannot be too careful in having everything quite ready for shortening sail at a moment's notice. We have known several instances of vessels losing spars on such occasions; some topmasts, some top-gallant masts, and others with split sails, &c. We have also known several instances of vessels being nearly thrown on their sides, for the want of having hands by the sheets and halliards, on such occasions. In sailing close along high land, you will mostly be liable to sudden gusts of wind, and sometimes very heavy squalls, therefore, under such circumstances, you cannot be too well prepared. In going in or out of ports or bays surrounded with high land, you will always be more or less liable to sudden gusts and changes of wind, therefore it will be right to be prepared at all points as to sails and anchors; and as in such places, between the squalls you frequently have calms, it would be desirable to have boats, hawsers, and kedges, ready for use at a moment's notice.

Spring, when used, attached to the anchor or cable.

In using a spring from the bower anchor or cable, for the purpose of getting a ship's broadside to bear steadily on any object, can never be equal to the steadiness acquired by using a second anchor, with a stern-cable or hawser. If you have taken up a good position with the spring, and your broadside bears well, you never can depend upon keeping the ship's position for any time, as it will be liable to alteration with every change of wind or tide. Suppose a ship to be running in with the wind from the sea, to engage a battery, or vessels at anchor. She has anchored, and sprung her broadside to the object; while firing, the wind comes off the land (no uncommon case near high land), the ship must then drop over or

past her anchor, until she lays her broadside by the anchor and spring on the opposite, or in-shore side, which increases her distance from the object fired at, and lays her open to much annoyance from the enemy's fire, while perhaps very few of her guns will bear. A spring is at all times little to be relied on, compared with a stern-anchor. After it becomes dark, a spring will much decrease the certainty of your practice. If a ship has a good scope of cable, with one anchor a-head, and the other astern, rather tautly moored, and her broadside bearing well on the object, there will be little fear of her shearing about much. But should it be requisite to fire the guns at night by previous bearings, with the quoins of the guns marked for elevation, then to make the practice more certain, it would be well to have two kedges, with two good strong hawsers laid out on the off side, one on the bow, and the other on the quarter; the hawser from aft being attached to the anchor on the bow, and the one from forward to the anchor on the quarter; these two hawsers crossing each other at a good angle, with as much scope as possible, well boused taut will insure the direction of the guns by bearings at night, and steadiness of aim by daylight.

Steering with stern-way in making a stern-board.

From the beautiful manner in which a well conducted steamer is managed when under the influence of stern-way, and the considerably decreased time which it takes to turn a steamer round with stern-way, when compared with the same evolution under the influence of head-way; when we see the masterly manner in which steamers thread their way stern-foremost amongst vessels, &c., we cannot help thinking that this manœuvre is not sufficiently understood, or practised by sailing vessels, even when placed in situations where it would be most useful. Steamers have thus shewn to us the full

usefulness of the rudder when applied to stern-way. The reason why a vessel with stern-way goes round so much quicker, arises from the full force of the water acting much more directly upon the rudder, when she is thus propelled stern-foremost. Sailing vessels would often escape danger, if their management with stern-way were more generally practised as a point of seamanship, which would make it be better understood, and practised with more coolness in the time of need, if often done, previous to the hour of danger. A ship might practice this manœuvre through two lines of her own boats at sea in moderate weather. A ship from unavoidable circumstances may not be able to weather a shoal or a line of vessels, and at the same time not have room to tack or wear, still she may with judgment be brought head to wind with everything aback, the head sails run down, braces well manned on both sides, great attention to the helm, with an increased number of men at the wheel, she may be steered stern-foremost past, or through the danger, until she gets sufficiently to leeward for filling her sails. If a ship should have to back astern, the sails on the main-mast, from their central position, would be the best for that purpose, by running the foresail up, and lowering the sails on the foremast. We are aware how much more directly steamers can apply their power for propelling their sterns foremost, still we think that steamers show us plainly that more can be done by sailing vessels in steering stern-foremost to avoid danger, and this can only be obtained by practice.

Stopping in running gear, foot-ropes, &c.

The practice of stopping in running gear, foot ropes, &c., has its advocates. Some very good officers are of opinion that it gives a ship a neat man-of-war like appearance, to shew as few ropes as possible. Others are of opinion that a ship never looks so well as she does with all her ropes taut and in

their proper places. Other officers again like the appearance of the gear stopped in, but admit that it should never be done excepting when the ship is moored, thereby implying a want of readiness when the gear is stopped in. The sails must be exercised whether moored or at single anchor, if you wish to keep ships in a state of efficiency. If stopping the gear in, or having every rope taut in its proper place, could be treated as a matter of taste or fancy, it would then be of little or no consequence, but let two ships of equal size and smartness be required to make all sail together, one ship having all her gear stopped in, and the other one having everything taut in its proper place. There can be little doubt amongst seamen which ship would be under sail first. Let the same ships shorten, and then furl sails together, and the ship which stops her gear in will require more men aloft, and generally have her men last down out of the tops, besides which, the men on the yards often have their lives endangered by sheets and reef-tackles getting under their chins, by the men on deck hauling them taut while they are loosing the sails. If the sail-loosers have only their sails to attend to with their ropes in their proper places, it simplifies the duty for the men aloft, and prevents much unnecessary hauling taut of ropes on deck. In ships that stop their gear in, it is no uncommon thing to see many rope-yarns flying away from the different running-ropes, whenever sail is made on the ship. The vessels which I have generally seen most admired for efficiency and warlike appearance, have been those vessels which always have their ropes in their proper places, taut, with the fewest stops on them. I have known this to be carried so far in some ships, that the courses were always furled without starting the clew-garnets; in this way, the clews of the courses were kept like the clews of the topsails, therefore always perfectly clear. Next to the beauty of a ship under sail, comes her appearance just before sailing with all the studding-sails in their places,

ropes taut and clear, masts, tyes, parrels, and standing parts of the sheets on the yards, &c., nicely greased, all looking invitingly to insure the quick spreading of the sails.

On the sails to steer by when close-hauled.

Had we not seen the mizen-topsail on several occasions, chosen as the proper sail to steer a ship by when close-hauled, this article would never have been inserted here. Seamen are perfectly aware that the mizen-topsail should not be used as a proper sail for conning the ship by; still, as we have often heard it asserted, that as the mizen-topsail is always the first sail to touch when close-hauled, that it should, in consequence, be the proper sail to conn, or guide a ship by. Experience teaches us, that this view of the case is fallacious, and that the touching of the mizen-topsail arises from the mizen-mast unavoidably being so near the main-mast, and that the force of the wind while gliding off such a powerful sail as the main-topsail, occasions an eddy wind, which shakes the weather-leach of the mizen-topsail; and what proves this more fully is, that the weather-leach of the mizen-topsail is sooner shaken in proportion to the strength of the wind. With all plain sail set, the main-sail is generally considered the best sail to steer the ship by; with the main-sail up, the main top-gallant sail is then the best sail to steer by; and with top-gallant sails handed, the main-topsail. In making long passages, some very good seamen set a small fore-topmast studding-sail to steer the ship by, by which means they insure all the sails being kept well full; the fore-topmast studding-sail being sure to tell tales, if kept too near the wind. We knew a ship where the quarter-masters were obliged to steer her by a straight wake close-hauled, and a ship of the line which had scuttles cut through her poop-

deck, that the man at the helm might see to steer the ship by the mizen-topsail.

Station bills.

Care should be taken that the quarter and station bills are corrected every morning and evening, to make good any vacancies occasioned by sickness or casualties, and if short handed, to equalize the men at their quarters, &c., that they may be aware of their extra duties, consequently, more prepared to execute them without loss of time. In all cases of great emergency, the want of this precaution will be found to lead to confusion and loss of time, but in nothing can it be more felt, than in preparing a ship for a night action, and in a ship of the line above all other ships. In other evolutions, you may lose a yard, or mast, or sail, from men being out of their stations; but, when the question relates to the readiness of a ship for action, it not only involves the loss of a ship, but the honor and credit of the greatest naval power in the world.

On having the rating of seamen's shoemaker, for repairing the seamen's shoes.

Nothing can contrast more with the majestic and beautiful appearance of a ship of war, and her fine seamanlike and otherwise well dressed ship's company, than to see numbers of her men going about the decks, or on their various duties, without shoes; and in many ships, this extends to the boats' crews, and sometimes to working parties on shore, dock-yard duties, &c. Much of this arises from not having a proper person on board to repair the seamen's shoes when requisite; the nature of a seaman's duty requires so much going about the rigging, in doing which, his shoes are continually breaking the stitches which confine the upper leathers to the soles,

and this is done by the sharp bend of the ratlines, occasioned by the men's weight upon them in going up or down the rigging, which presses the upper leather from the soles, this, when helped by the clove-hitches made by the ratlines round the shrouds, soon tends to destroy their shoes, and when the upper leather has taken its departure much from the soles, a sailor considers them good for nothing, consequently, they quickly find their way into the scavenger's basket, and from thence, into Neptune's repository. From never having been accustomed to have the most simple repairs made to their shoes, seamen generally consider them worn out when no longer wind-tight or water-tight, and as going up or down the rigging frequently soon brings this on, no one who had not paid attention to this subject, would hardly believe the quantity of shoes that are continually thrown overboard from a ship-of-war, that might, with very little repairs, be made equal to new, as far as being useful to the men. I think this one great cause, why seamen are so often seen without their shoes. If one or more shoemakers were allowed, according to the size of the ship, and number of her crew, it would enable officers to carry out this desirable object much better, for the good of the Service, and the men themselves. I know that seamen often go without shoes when they can do it, on account of the expense. It is only to see how well this plan works with the marines, to insure its doing equally well with the seamen. Many seamen leave off wearing shoes from motives of economy at first, but after they become accustomed to being without them for any length of time, they cannot bear the confinement; hence, often arises the trouble which officers have in getting seamen to wear them. Too much attention cannot be paid to this subject, on account of the various accidents which seamen continually meet with from not having their shoes on, as well as what they suffer in their general health, besides the privateer-like ap-

pearance which it gives to a ship-of-war. If a seamen's-shoe-maker were allowed, with assistance in proportion to the size of the ship, the seamen might be continually kept with good shoes, and at considerably less than half what most of them at present pay for that purpose.

On making show-ships of vessels of war.

When vessels are made show-ships, it takes much from the comfort of every one on board, more particularly the ship's company; that is, if it is done as some ships do it, by sending all the men off the lower-deck, and crowding them together on the main-deck, on the opposite side to the show-side, every time a party comes on board, to whom the commanding officer may wish to shew the internal arrangements of the ship. In other ships, the men are allowed to remain in their messes, but obliged to stand up with their hats off, while these parties are going round the lower-deck. It would be worth a consideration whether a noble fabric like a ship-of-war, would not be seen to a much greater advantage, with all its numerous exercises, artificers, general and daily occupations all in full force. Instead of what is usually the case, the decks cleared up, and everything, crew and all, put out of sight as much as possible. The more you can avoid disturbing the men in their messes on such occasions, the better it will be, as many of them are only below during their turn off duty. It will be desirable to instil into the minds of the ship's crew, that the ship should be always fit to be seen, except some unavoidable duty prevents it. If the men ever get into the habit of seeing everything give way to show-days, they become more careless at all other times. Stowing away everything out of sight when any one comes to see the ship in a hurry, gives the ship's company dirty habits, which it will be difficult afterwards to eradicate. When a vessel of war is in good order (which she never can be without

extreme cleanliness), and all her exercises and occupations going on, she is then fit for any party to see, in fact, much better than she can ever be after all the hurry and annoyance of moving the men about the decks. These observations have nothing to do with officers' visits, or inspections.

Scrubbing hammocks and washing clothes at night.

We think it would be advisable to discontinue the practice of scrubbing hammocks and washing clothes at night, as much as possible, as by this means the sick-list is often much increased; because, after washing and scrubbing, their shirts can not be so dry when going to bed, as if they had not been dabbling in the water: and that part of the watch who have finished their washing and scrubbing quickly, and those who evade it altogether, are frequently found lying about on the wet deck. The number of complaints are considerably increased by washing and scrubbing at night, because a sleepy sailor, like any other sleepy person, will endeavour to have his sleep out, therefore, many try to evade washing and scrubbing their clothes, consequently the morning's report brings a long list of defaulters; besides which, clothes and hammocks washed and scrubbed at night, are never so clean as when done in the day-time. When the clean hammocks are inspected at divisions, nearly one-fifth or one-seventh of them, have to be scrubbed over again; and how can this be wondered at, when the men have no candles for this purpose but what they find themselves; and sometimes with the best management they can not help running short, and when this does happen, they can only wash, or scrub by guess. If you wish a ship's company to look well, and take pride in their clothes, always give them fair daylight for that purpose. If a sailor is obliged to wash at night, he will wash only what he cannot help; but if

you give him the day to do it in, he will then be most careful in washing everything, even to his ditty bags, &c. When possible, give the men as much hot fresh water as you can; if the hammocks are stowed before washing clothes, it will prevent the men turning in with their wet clothes on, as they finish washing and scrubbing. The hammocks being stowed will also cut off all retreat from every one inclined to skulk. In the day time the clothes are properly hung up, and well looked after; this cannot be so well attended to at night. Besides this, if a sudden squall should take place in the night, the men are often employed about taking down their clothes, instead of attending to the duties of the ship. Washing by night-watches at sea is much disliked by seamen. In the first place, their clothes are much oftener torn and lost at night. Secondly, they are deprived of their accustomed rest in their watch on deck, &c. Landing the ship's company to wash clothes, or scrub hammocks, decidedly has a bad effect on the discipline of a ship; as out of this frequently arises drunkenness, desertion, selling their clothes, &c. Sailors are proverbial for knowing how to raise the wind to get grog. On viewing the bay, or island, or place you may wish to land the ship's company to wash their clothes, or scrub their hammocks, you may think it impossible for the crew to obtain spirits, and no doubt the first time they are sent on shore it may be so; but except the place be wholly uninhabited for a great distance, you will not be so fortunate afterwards, as the price the men are willing to give for grog, either in money or clothes, is soon conveyed to the shore by the bum-boat man, who has no difficulty in finding an accomplice to smuggle spirits to the washing-party, however great the risk may be. But when washing, or scrubbing takes place near a town or village, the difficulties then become tenfold, from the increased facility of obtaining spirits, and the greater number of bad characters of all descriptions, who

try to mix themselves with the ship's company. In scrubbing and washing clothes on shore, too many temptations are unnecessarily thrown in the way of the ship's company, by which complaints are increased, and the whole operation made one of five times as much trouble, besides giving every facility for smuggling spirits into the ship when the men bring their washed clothes on board; and if you add to this the mortifying feeling that everything would have been right, had the clothes or hammocks been washed or scrubbed on board the ship; the object of having the decks washed and dried a little sooner, is not worth the trouble and vexation of washing clothes or scrubbing hammocks on shore. As a general rule, we think it will be found preferable to do whatever can be done on board conveniently, instead of its being done by working parties on shore, in places unconnected with government establishments. By unnecessary working parties on shore much time is lost, and extra work given to the boats' crews. If a boat has to be repaired, it will generally be much quicker done on the booms, in the sight of the commanding officer, than if done on shore; and no doubt equally well done: and the same with spars, rope-makers, &c. We have seen ships with nearly half their crews continually employed on shore in working parties, and each party having its tent made out of the spars from the booms, covered with studding sails, &c. When this is done, excepting from necessity, it must, we think, have a bad effect on the discipline of the ship, as drunkenness and loose habits will creep into the ship under these circumstances, however attentive and strict the officer may be. Besides, no ship can possibly be so ready for any case of emergency, with so many things on shore.

On steamers.

In the event of another war, the application of steam will oblige our vessels of war always to be ready to defend them-

selves even in our own ports, more particularly at night, and that while undergoing repairs or refitting. In former wars, our officers never even dreamt of any attack on our ships, more particularly in our own ports, therefore both guns and decks, while undergoing repair or refitting, were frequently left lumbered during the night; and though night time was always considered in our own Navy, the favorite time for attacking the enemy's vessels with our boats, still we rested in perfect security that no other nation would ever attack our ships, more particularly in our own ports; and in this security so far yet, we have not been much mistaken. But steam-vessels will materially alter naval warfare in all points, and in no point more than bringing a force under cover of the night, to any place where the least expected. The former uncertainties of winds, sails, oars, and tides, are now much obviated by the application of steam, therefore it would be unwise not to be always prepared with clear decks, great guns, and small arms, every night, however advantageous and secure the port or roadstead may appear to be. It would appear clear, that no officer commanding a vessel at Spithead, Plymouth Sound, &c., at the present time, would be considered justified, in the event of a war, in not having his ship perfectly clear for action, whether repairing, or refitting, or anything else. If the ship require so much doing to her, that she cannot have her guns in their places, at night, and ready for action, she ought to be repaired in the harbour. A daring band of enemies in a few steamers might do the greatest mischief to our ships, if not prepared at all points to resist them, in the event of another war. All I wish to observe is, that steam will oblige officers to be more on the alert, than if we had only wind, sails, and oars to contend against.

Men going on immediate service.

When men are required for immediate service, and no pre-

vious opportunity for cooking their provisions before leaving the ship, salt pork had better be issued to the men in preference to salt beef, as salt pork can be much easier cooked, by cutting it into slices and broiling it, in fact, both seamen and marines generally care very little whether salt pork is cooked or not, as long as they can get it. I have, on several occasions, seen increased restrictions obliged to be put on the issue of raw salt pork, to prevent the crew from eating it in that state, because, for a continuance, it is not considered wholesome for the men; but when they must be provisioned quickly, and no meat cooked, it must be of consequence to give them meat which they like and relish with their biscuit, in preference to that which they do not like raw, and will never eat it so, if they can possibly help it. This may be deemed a trifle by some, but it can no longer be considered so, when the comfort of so many depends upon it. When the marines were landed in Syria, in 1840, they applied to have all pork, and various good reasons were given at the time for complying with their request, and it was done accordingly. Those who have been much accustomed to boat service, must have noticed, that when the stock of boiled beef and pork is out, and no opportunity of cooking more, that the raw pork will all be eaten first, and that if you still have no opportunity of cooking the beef, they will not eat it raw, as long as they possibly can get anything else.

On sails being too taut up during rainy weather.

Capt. Griffith *on seamanship* (page 304), says, "Now reflect that a topsail hoisted taut up, &c., must endanger the yard, from those casualties which the idle and thoughtless never dream of. A heavy night dew, a shower of rain, a mere change in the air from dry to damp, will cause, not only the leach-ropes, but the halliards, tye, &c., to shrink, so as to place a great additional strain on the yard. A little swell and

a head sea will, from pitching, operate to spring it also. Is it not better to husband the yard, &c., against the day of need, in chase on a lee shore, &c. Besides, in a man-of-war with plenty of men, how easy it is to take a pull of the topsail-halliards while the top-gallant sails are loosing." Capt Griffith's remarks on the effect of damp or rainy weather, on topsail-halliards, tyes, leach-ropes, &c., are equally applicable to all sails that are very taut up during a shower of rain, more particularly if the rain is of long continuance. In reading Capt. Griffith's remarks on this subject, the mind runs back to the number of spars, sails, ropes, &c., which one has seen carried away for the want of a timely easing away of halliards, sheets, tacks, &c., so as to admit of the shrinking of the ropes and canvass during a heavy shower of rain. There are few first lieutenants who have not saved the Service some yards, or sails, by themselves giving the ropes a timely check. If a ship has all her sails tautly set, and a very heavy shower of rain comes on, and all the ropes are kept fast, something must give way: hence it arises, that in such weather, when the sails and ropes are not attended to, that more casualties take place at that time, than at any other—such as yards carried away in the slings, leach-ropes, tack-ropes, block-strops, &c. After a heavy night's rain in harbour, when you see how the yard-arms are buckled up with the power of the rain on the lifts (this must have struck every seaman), if the signal-halliards have been forgotten to be slacked over night, you will often see the cleat torn away from its place, and should the halliards be belayed to a large cleat by mistake, the halliards will either be carried away, or the truck at the mast-head broken; but should the signal-halliards remain fast to the cleat when torn away from the ship's side, the cleat will often be above a man's reach from the deck. The quantity of wet which rope takes up, proves the power which rain must have on a dry rope already at a full stretch.

On not carrying sail in proportion as the gale decreases.

We often hear much said of vessels carrying more sail than prudence would dictate; and on many occasions, no doubt, vessels have been endangered, spars carried away, and lives lost, for the want of this precaution. If a ship is heavily pressed with sail, without the hope of some adequate advantage to the Service, the officer so carrying sail brings a heavy responsibility on himself, in the event of any serious accident to ship, life, spars, sails, or rigging. There are some cases in which, as long as you can get a fathom more out of a ship, sail must be carried, such as chasing an enemy's vessel of war, ship charged with urgent despatches, working off a lee shore, &c.; still, with all this well considered, I am much inclined to think that many of our vessels suffer seriously from the want of carrying sail as blowing weather decreases: it is no uncommon thing to see a ship's sail reduced by a gale to her close-reefed main-topsail, and perhaps storm fore-and-aft sails; and while the gale lasts, though the sea may be very high, still the power of the main-topsail more particularly, and fore-and-aft storm sails, will keep the ship comparatively easy; but as the wind generally lessens much sooner than the swell goes down, it is no uncommon thing to see a ship rolling heavily to windward, and her sides straining with the heavy working of her masts, guns, &c., and this too often for the want of an increase in her sail; this is a circumstance of too frequent occurrence, not to have been often noticed by most seamen. There are few people who have been much at sea, who have not seen things thrown from side to side on such occasions; and sometimes midshipmen's chests playing at leap-frog with each other across the hatchways; this, and the heavy creaking noise of the guns, bulk-heads, &c., tells every-

body below what the ship wants aloft. Low sails on such occasions, are of little use in steadying the ship compared with the topsails; low canvass is so liable to be becalmed in a high sea-way; besides, the higher the resisting power is placed on the masts, the more it will tend to decrease the rolling motion. The heavy jerking motion which ships receive on such occasions, is enough to do serious injury to any ship, more particularly an old one. To say the least of it, ships often have to undergo a thorough caulking, from neglecting to steady them with more and higher sail. I do not mean to advocate carrying sail beyond what is right and prudent, neither do I wish to force a ship against a head-sea on any account; but what I wish to observe is, that as the gale decreases, and the weather appears favorable, that a ship should not be allowed to tear herself to pieces, for the want of more sail to steady her. My own experience has taught me to believe, that many vessels are seriously injured from the idle practice of keeping them under low sail in a high sea, after the wind has much decreased, merely to keep still, waiting for fine weather, while all the time the ship is making herself more fit for a dock-yard, than to remain at sea. I have on more than one occasion, known a vessel to require a thorough caulking, entirely from the want of a little timely sail being set.

On ornaments to ships.

To have many unnecessary ornaments in a ship-of-war, must appear out of character, to seamen generally. The more moderately ornamental you can make even the things necessary to a ship, the more you add to the comfort and smartness of a ship's company. When ships are highly ornamented, it often occasions much vexation both to officers and men: besides the never-ending attention these ornaments require, they must be brought up in the morning, they must be

covered during every shower of rain, they must often be uncovered between the showers, they must be taken down in the evening; then comes a long chapter of accidents to which they are liable; then comes the number of artificers continually making and repairing all this finery, often to the sacrifice of valuable work left undone. Seamen generally give these gingerbread ornaments their proper value; and landsmen have full opportunities of seeing similar things much better turned out of hand every day, on shore, if they like. The number of necessary calls are already quite enough, without the calls we so often hear to take these ornaments up and down, to cover them, to uncover them, or to clean them, &c. Then comes the continual cry to take care of those ornaments; so much so, that in some ships one feels as if the quarter-deck, more particularly, were in a glass-case. People who go on board to see a ship of war, are less taken up with this part of her appearance than any other. One of the greatest beauties of a vessel of war, is her total absence of all gaudy colours, both inside and outside. What ornaments can vie with a ship of war's beautiful batteries, well arranged arms, well painted sides, clear and clean decks, well stowed white hammocks; and then look aloft, and see the symmetry of her jet-black rigging, high and tapering masts, with the graceful pendant; and the flag at either end, which has so long braved "The Battle and the Breeze;" well spread yards, white sails, with equally divided black gaskets; these are the sights for a landsman. In fact, a ship of war when once in order, is one of the most noble sights in the world, even when at an anchor, but the interest is much increased when a ship of war is going through her evolutions aloft, to see the activity of her well dressed crew spreading every sail to the breeze, the rattling of the numerous ropes, the hoisting of the sails, and the magic-like way in which everything finds its place, must surprise a landsman infinitely more than all the finery you

can possibly put about a ship; then if to this you add the imposing sight of a ship of war at general quarters, the rapidity and order with which everything is done in such a confined space, must create wonder.

Sunday.

In ships where the Sabbath day is strictly attended to, it calms and soothes the minds of the ship's company, and by degrees cultivates reflections, which are the surest pledges to all good conduct in this world, and happiness hereafter. It will be difficult to find any congregation more attentive during church time, than the crew of a man-of-war: does this not strongly prove that their feelings are in the right direction, and that in a religious, as well as in a moral point of view, every inducement ought to be given to foster and nourish this feeling, by giving them both time and opportunity for reading their religious books. If the ship is in harbour, all boats should be up, but those actually required for pressing service; and no work should be done that could possibly be deferred until Monday. This makes a ship's company feel the blessing of the Sabbath as a day of religious reflection and rest. When a ship is at sea, after the ship's company have had their dinner, call the watch, merely to have them out of the way while sweeping the deck, but the moment that is done, and the weather will permit, pipe them down, and let them have the afternoon to themselves as much as possible. When it is the regular system of a ship, always to mark the Sabbath-day in this manner, its effects are soon made visible by the quiet, orderly, and well conducted manner of the ship's crew.

On giving the young gentlemen every opportunity of working the ship.

In some ships much care is taken to give the young gentle-

men in their turns every opportunity of putting the ship through her different evolutions; those officers who give time and attention to this subject cannot do a greater benefit to the Naval Service. Any officer who has reflected on this subject, may have observed that officers so brought up, the moment they received their lieutenant's commission—or, if by any chance before that time, they are required to take charge of a watch—with what confidence, and with what different feelings altogether they take charge of the deck, compared with those who have served their time, without having had perhaps one single opportunity of even tacking or wearing a ship, and such cases are by no means uncommon. When young officers are early taught the management of a ship under sail, it gives them an anxious wish to improve themselves in seamanship, and insures a seamanlike confidence which never deserts them in after life. When so much scientific knowledge is expected of young officers, the science of seamanship should always be kept strongly in view as a thing on which will depend much of the honour and glory of our flag, the safety of our ships, and the lives of our seamen. Few things require such early training as that of making a good practical seaman, so much so, that those who enter the Navy late, seldom make such good officers as those who enter the Service at an early period. What must be the feelings of pride and wonder, when a young Middy, for the first time in his life, tacks or wears a ship; to see such a noble fabric obedient to his command, her active and ready crew, her well worked yards, flying ropes, and quickly altered position, all show what can be accomplished by a few magical words. If a youngster have any talent for his profession, nothing can give him a higher opinion of that profession, than the management of a ship of war, in her evolutions under sail more particularly. Those youngsters to which the Service gives the most opportunity of becoming seamen, will, provided their

zeal and abilities be equal, become the best seamen. Many officers never entirely overcome the want of this early training, which, had they had when youngsters, would have made them much more useful to the Service. Giving youngsters the habit of, in a measure, feeling the responsibility of putting a ship through her different evolutions, by degrees ripens into experience, and shows its good effects when those officers are required to command on the quarter-deck. I much fear that many of us do not take it enough into consideration, that the little cadets of the present day must become our future captains and admirals: if we bear this strongly in mind, nothing that can advance their abilities, or form their characters, for the good of the Service, can possibly be considered a trouble. Some captains appoint a passing day for all the young gentlemen, for seamanship, once a month; this also has the effect of making them brush up their memories, in endeavouring to acquire as much knowledge in that branch of their profession as possible, as a written report is given to the captain, each time specifying the advancement of each young gentleman. The first lieutenant, master, and boatswain, I have generally seen appointed to examine the young gentlemen the first of each month, (or as soon after as possible, should anything prevent it at that time.) A thorough knowledge of seamanship should not be considered second to anything in the making of a good officer. Whatever an officer's abilities may be, if he is wanting in a knowledge of seamanship, he never can hold his proper place as an executive officer, neither will he be as much respected by the ship's company. Every young officer ought to be ambitious to become a good seaman in this part of his profession, that his mind may be as quick to conceive what ought to be done, as a ship is rapid in her evolutions. * "Were the young mariner at his leisure hours to employ his

* Gower.

mind in reflecting on the various circumstances to which a ship is liable, and apply his theoretical knowledge to the more immediate event in point, his mind would be stored with many excellent rules which would readily occur to him at the moment of need."

Painting ship.

Out of the catalogue of things which cause the detention of ships-of-war in port, perhaps painting ship would fill up a great space in that catalogue. We have known even such a serious thing as the setting up of the lower and other standing rigging deferred, in order to have the ship painted; and day by day deferring it until the paint was hardened, until at last the ship is ordered to sea in great haste, with her rigging very insecure, from not being sufficiently taut, in consequence of which, all the masts are in extreme danger, supposing her to be caught in a strong breeze on the first night after sailing. Provisions, water, coals, wood, and various other stores without which a ship cannot sail, are too often deferred until the last minute, in order to have the ship painted. In many places, if you do not complete a ship while the weather is fine, you cannot take in your provisions, &c., when it blows a strong breeze, and should it blow for some days, and your time of sailing have arrived, and though a fair wind is blowing, you cannot take advantage of it, as you must wait to complete provisions, &c. I mention this circumstance, as I know cases in point. Had the vessels I speak of completed their provisions first, they might perhaps have been several days sail on their passage. I do not for one moment wish to be thought to depreciate the improvements which paint makes in the appearance of a vessel of war. I am only anxious to point out, that her efficiency should be first attended to, in the fullest sense of the word, her beautiful painted inside and outside will avail nothing, if it has been obtained by the neglect of all other requi-

sites, and she is found wanting in the hour of need; but if all other things are quite right, the paint can be sacrificed at any moment, and the ship off for sea. After a ship sails from her port on first commissioning, when she has any thing to do with her standing rigging, it should be done, and provisions, water, &c., taken in as soon as possible; if the paint, rigging, and provisions can go on together, all well and good, but if not, the paint should always give way to things of much more importance. When a ship is quite ready in every other respect, if you chance her painting, you will mostly be successful, as far as relates to the sailing of the ship.

To make sure of casting the ship the right way, by slipping, or cutting her cable.

If a ship has anchored in a roadstead, and if from unforeseen changes of wind and weather, it becomes unsafe to remain at an anchor, and doubts are entertained of the ship casting the right way, the circumstance of saving the anchor should never induce the officer to hazard the experiment, but the ship should be cast by means of a spring, and the cable slipped. To effect which, the stream-cable, or a good hawser, should be got out of the stern, or quarter-port, and bent to the riding-cable, outside the hawse on the opposite side, and hove taut, but kept clear for letting go and running. Veer away the riding-cable, having previously unshackled it, and when the ship has been canted sufficiently for the sails to act, and she begins to draw ahead, slip or cut, if necessary; the slipped part of the bower-chain having been previously buoyed.

Upon steering.

* "As a compass suffers much agitation from the motion of a vessel, and does not return sufficiently quick to its parallelism

* Gower.

to point out the absolute position of the vessel's head, good steerage requires further assistance, which, depending upon a quick sight and nice judgment, is the reason we meet so few good helmsmen. The helmsman must not pore over the compass, but alternately watch the compass and the motion of the ship's head passing the clouds, the sea, or any other objects more fixed than the compass, which may happen to present themselves to view. In blowing weather, if one person can manage the helm, the feel of it in his hand is a nice criterion of judging whether the vessel be coming to, or falling off; so also is the greater or less noise, or whistling of the wind. As the vessel comes to against the helm, it will feel heavier; and the wind coming more forward, will appear stronger: on the contrary, as she goes off, and gives way to the power of the helm, it eases in the hand, and by the wind drawing aft, it appears to lessen. These circumstances, to an attentive and nice observer, mark the motion of the vessel sooner than the compass." Added to this, the stars, and even the breaking of the waves at night, will be a great assistance to the helmsman.

Spars sending on deck, and striking guns, or other weights below, during blowing weather.

As I believe no fixed rule can be laid down for sending spars on deck, and striking guns below, with the view to ease the ship at sea during blowing weather, as the various forms of ships require for each a different treatment: sharp bottomed ships, with great beam, require more steadying than others, therefore, in such ships, it should be well considered before sending spars on deck, or lowering weights, as a ship's over stability is very often the chief cause of her being uneasy, and tearing herself to pieces. When a ship sails, with six or seven months' provision, and stores on board, if she meet with bad

weather, she generally suffers more from it, than if she were to meet with the same weather some three months afterwards, when her provisions and water have been reduced, and this is, in a great measure, occasioned by the weight being decreased below the water-line; for as a ship is thrown from her equilibrium by every heavy sea, she will then return with decreased violence in proportion to her decreased over stability: consequently, in sharp bottomed ships, with great beam, it does not appear desirable to lower their weights, as it would only add to heavy lurching motion, and perhaps endanger their masts, much more than if they had their spars aloft. I was in a frigate where we always found it ease her by housing the top-gallant masts, instead of sending them on deck, excepting when it blew very hard. In narrow full-bottomed vessels, it often becomes absolutely necessary to get what weights you can even below the water-line, and make everything as snug aloft as possible. According to my humble opinion, over stability is not desirable to make an easy ship in blowing weather, but while the wind is moderate, and the sea not very rough, sharp bottomed ships, with great beam, while sailing on their fine lines, will have a decided advantage over most other ships. I was in a frigate, some thirty years since, when on the Banks of Newfoundland, we fell in with an English merchant brig, with her ensign hoisted, union downwards; we immediately sent a boat on board of her, and found that she was laden with salt, and had experienced much blowing weather, during which time, from her cargo being so low, and so heavy, she had in a great measure, separated her upper works from her lower, which obliged us to take out her crew and abandon the brig.

On taking the wives of seamen belonging to the ship to sea, to attend on passengers.

The practice of taking seamen's wives to sea, to attend on

passengers, cannot be considered a desirable one for the discipline of a ship, or the good of the service. The women so selected to attend on my lady this, or that governor's wife going to this or that island, are, no doubt, generally very well conducted, still their altered position is frequently too great for them to contend against, by which means, they often are led into vanities and conduct which embroil their husbands in frequent quarrels. If I thought this practice were likely to be beneficial to the seamen, I should be one of the first to uphold it in the strongest possible manner; but my humble experience has taught me, that in taking seamen's wives to sea, you do anything but benefit the seamen; as it often makes their position very unpleasant in the ship, and gives them many more difficulties to contend with. If passengers have the heads of their own servants turned by the foolish attentions they receive on board ship on a long voyage, the mischief to the ship ends when they leave, but not so with seamen's wives, as when they go out in this manner, they frequently remain until the return of the ship to England. It gives me pain to observe, that on several occasions I have seen these women put all order and good discipline at perfect defiance. If a woman grossly misbehave herself on board ship in her own country, the thing is soon decided by sending her on shore; but in a foreign country, or even in our own colonies, the case becomes more distressing: the distance from her native country, the difficulty of procuring her a passage home, and also the money to pay for that passage when obtained, &c.

Crossing Top-gallant yards.

In this evolution, whether done by the hands or the watch, with or without sails, it will be desirable to let each of the topmen have his turn in crossing the top-gallant yards. You may do it by divisions of watches, or mustering a sufficient number of topmen for that purpose every morning, or every other morning, according to circumstances. I was in a ship where the captain had the top-gallant-yard men changed every morning, before crossing top-gallant yards. In this manner you make the topmen smart, with very few exceptions. I have known several ships which never exercised more than one set of top-gallant yard men, and others that never exercised more than two sets, one in each watch. The ship which keeps only a regular set of top-gallant-yard men in continual exercise, will generally beat the ship which is continually changing her men, or at least she will do so for a short time; but let the ship with the regular top-gallant-yard men have any of them on shore, or in the sick-list, you will then find that the ship which exercises all her topmen by turns, will have the advantage in this, as she will in most cases where the men are required to move quickly about the rigging or yards.

On tacking.

Nearly every change in the wind or sea, occasions some deviation in the mode of tacking. In light winds, when everything is quite ready for going about, and you are doubtful whether the ship will go round, run the head-sails down, and if there is sufficient wind to give her head an inclination to come to windward, the moment she does so, put the helm down, and haul the boom in midships; but should this be doubtful, the moment the head-sails are down, put the helm a-lee, and haul the boom in midships: in both cases check the head-braces when you think you can help the ship by

doing so, keeping them manned ready to brace up, the moment the sails are well aback; do not haul the main-yard until the wind is nearly two points on the bow, and run the head-sails up at the same time; but of course much will depend on the quick or slow working of the ship, as to the time of hauling the main-yard. I have for many years preferred tacking with everything fast, as long as the wind and sea would permit it. Suppose you do ease off the fore-sheet and head-sheets when the helm is put down, the whole lever of the sails while shaking, is thrown further forward; the jib, instead of having its weights divided between the bows of the ship and boom-end, is jerking heavily at the boom-end; and the fore-sail, instead of having its weight divided, is jerking away from the bumpkin. In keeping everything fast, the sails help the ship until the last moment; she gains more ground, as she shoots nearly twice the distance; but in this, like most things in seamanship, it requires care when you do not wish the ship to shoot too much in stays. I was in a frigate where we invariably tacked with everything fast when wind and weather would permit; and when the men were at their meals, we always put the helm down, and turned the hands or watch up, about-ship at the same time, and we invariably found the men at their stations ready for raising tacks and sheets; this was most useful, as it gave the men the habit of moving up quickly, and insured them many meals in their messes, which they would not have had otherwise. In a strong working breeze, with much sea, it will be desirable to keep the fore-tack fast until you haul the main-yard, with attention to head-braces, if required, keeping look-out for stern-way. Ships are frequently baulked for the want of the main-yard being up in good time; the first swing of the main-yard will carry it faster forward than you can run in a single part of a rope through one block, therefore, whenever you are anxious about the ship staying well in a breeze, your preventer-braces

being previously fitted with a double or two single blocks aloft, and both ends brought on deck, you can then work both parts, or only one, just as you think proper; but in a breeze, you will find a great help in working the preventer-braces both parts together at the same time with the main-top bowline, so as to keep the main-yard in its place until you receive assistance from the main-brace, if requisite. Head-bowlines should be well manned in hauling the head-yards round, as it not only assists the yards, but occasions the sails to fill rather sooner than they would otherwise. Great care should be taken to have the main-tack on board, and sheet aft in good time to let the ship feel the good effects of this powerful sail as soon as possible. Putting the helm down is seldom sufficiently attended to; if the ship is going nine knots or two, it is frequently put down equally quick. By looking over the ship's side previous to tacking, you can generally form a very good judgment of how she will go round; and should she not have sufficient way, keep her good full for stays. Ships are frequently baulked for the want of attention to this point, and sometimes from the over-anxiety of the forecastle-men to get the head sheets over too soon. At night, when you cannot see the mast-head vane, you must tack either by the driver, the heel of the ship, or the compass.

To strike topmast when the ship is rolling heavy.

Round your yard-tackles down on both sides, and haul them as much in midships as possible in this position, bouse them taut, secure two burtons at each topmast-head, with their double-blocks uppermost, and single-blocks at the lower yard-arms, keep them gently taut while the masts are swaying and the rigging easing off: the moment the masts are ready for lowering, keep a steady and equal strain on the

burtons as the masts come down. Great care should be taken that the trusses are not slacked too soon; and the moment the heels of the masts have well entered between the lower yards and the mast-heads, the trusses should be kept gently taut; rolling-tackles from each yard-arm close out, and then secured above or below the trusses, would not prevent the yards from going forward, but effectually prevent the lower yards from rolling motion, with the assistance of the yard-tackles. When the topmasts are struck, the yard-tackles would rather assist in keeping the lower yards steady while striking them.

Topsail-yard carried away under sail.

If a topsail-yard is sprung or carried away, it will much assist in securing the sails for sending on deck, if the clewline-blocks are taken off the yard and made fast to the foremost eye bolts in the topmast cap; by this means, you can walk your clewlines and buntlines up, unbend and sling the sail, with the yard-burton. When the sail is out of the way, it gives a better opportunity for sending the wreck on deck, and shifting the topsail-yard. In some ships, the topsail tyes are left sufficiently long for sending down the wreck of a topsail-yard —but the most approved, and we think, the best purchase for sending topsail-yards up or down, is a burton fitted for that express purpose: this purchase is very superior to the hawser formerly used, as it requires less men to shift a topsail-yard; the yard is swayed up much smoother, and not liable to those sudden jerks which you sometimes cannot avoid with a heavy weight on a single rope. Since burtons have been used for this purpose, topsail-yards are much easier shifted, and men's lives less endangered.

Tye-blocks.

Since the tye-blocks on the topsail-yards have been fitted with iron-strops, it requires that these iron strops should be filled in on the after side of the blocks, until quite level, and then well covered with leather or hide; otherwise, when the topsail-yards are near the mast-heads, and any rolling motion, the topmasts are much chafed by these strops.

Fidding top-gallant masts in a sea-way.

In this case, the top-gallant rigging should not be over-hauled, as in fine weather, but eased off as the masts go up, or you stand a chance of snapping the mast in the caps, by a sudden roll or pitch of the ship; but if care is taken in easing off the rigging (minding not to put too great a strain on the mast-rope), this cannot well happen. If you have any difficulty in striking top-gallant masts, make fast the standing parts of the yard-ropes, and haul down on the hauling parts, and the masts will come down with the greatest ease.

Bending a topsail in a gale of wind.

I believe the most approved way is, in reefing it by the foot. This is done in the following manner. Stretch the close reef of your sail taut along the deck, take the clews as near where they will haul up on the yard as you can, trace the clews down clear to the foot of the sail, then haul the foot of the sail taut, without moving the clews out of their places, then gather the foot as near the close-reef as possible, then tie your fourth reef round the foot, then your third reef, until all your reefs are expended round the foot of the sail, minding to keep the reef-knots as near at hand as possible, to be ready for casting off; by this means, you bend your sail without exposing more than one reef at a time, until you set your close-reefed sail.

Sending down top-gallant yards and masts.

In sending down top-gallant yards and masts at sea, in bad weather, many accidents have arisen from not sending them down through lubber's hole, when it might have been done with a little more trouble, and considerably more safety.

Unmooring.

No doubt, as Capt. Griffiths observes, that while heaving up the first anchor, much additional strain is frequently brought on the heaving cable, in consequence of not veering a sufficient quantity of the veering-cable to let the other become up and down. Capt. G. says, what every seaman I think will admit, which is, "that it will always be better to veer three or four fathoms more after the cable is said to be up and down." This can do no harm; it will put the whole strain of the ship on the anchor you are weighing, and thereby materially facilitate tripping it.

On vessels running foul of each other.

If two vessels run foul of each other, and much difficulty is experienced in separating them, if on anchoring ground, the weather-most vessel had better anchor immediately; taking in all sail, then the leeward one will drift clear of her; but if at sea, and not much wind or sea, all boats had better be sent to tow the weather-most vessel; the weather-most vessel should take in all sail, and the leeward vessel should make the best use of her sails to get clear. If it should blow fresh, everything in the shape of a stop-water should be put overboard from the weather-most vessel, to endeavour to keep her as much as possible to windward, that the other vessel may drop clear of her.

Attraction of vessels to each other, and of vessels to the land.

If vessels should be very near each other, though it may be a perfectly dead calm, and the sea as smooth as glass, and even vessels broadside to each other, still, experience teaches us, that the two vessels will gradually approach each other, until collision takes place, and under the same circumstances, though the sea may be as smooth as described, still the sea will always have more or less undulating motion; therefore, the sooner, and the more the two vessels' heads can be brought in opposition to each other, the better they will keep clear of each other, because whatever longitudinal motion a vessel receives, has the tendency of making her forge ahead. If a vessel is required to be towed round quickly, let all the force of boats be put on forward: we mention this, because we have several times seen them divided, one half towing aft, and the other forward, thereby losing the long lever of the bowsprit, or perhaps jib-boom. While on this subject, it has been remarked, that when large vessels have been set on fire during

the last war, in calm weather, that it has occasioned light airs of wind to blow directly on the fire. This may perhaps be worthy of notice when about to burn towns, shipping, &c., as the change of light breezes directly out of a port to the same breezes directly in, may be of consequence.

Vessels are generally supposed to sail faster when new, than after they have seen much sea service, and become old.

If the opinion be correct, that vessels generally sail faster when they are new, than they do afterwards, when they have seen much sea service, and become, in a measure, loose in their frames, that is, supposing vessels of the same size, copper equally good, masts, yards, sails, &c., the same in both cases, and sailed on the same lines. If this be true, it goes far to disprove the practice of loosening vessels at all points, so as to give the decks, upper works, masts, &c., as much play as possible while in chase. To give this supposed desirable advantage, stancheons are removed from supporting the decks, mast-wedges are taken out, rigging often slacked, and sometimes a butt of water suspended between the fore and main-mast; hammocks hung up, and the watch below desired to turn in, with a shot or two as bedfellows; then comes shot-boxes, bags, &c., to be suspended between the decks; this is all done with the intention of accelerating the vessel's speed—but some officers during our late wars, when in chase, have done most extraordinary things, with the view to increase the speed of their vessels, such as sawing beams, timbers, or planks, in two, &c. I have sailed with some officers who were so fully impressed with the opinion that the more you can give play to the masts of a vessel with safety, the more likely you are to increase her speed, that I once saw the laniards of the fore-rigging of a small vessel unrove,

and made fast round the fore-mast with that intention. If new vessels generally sail faster at a time when they are most stiff, the most compact, and the strongest, it gives rather a fair ground for supposing, that as vessels get old, that their very looseness of frame acts against their sailing. But I am inclined to advocate the general opinion of new ships sailing better than old ones, from the simple cause that they are considerably lighter, and that their falling off in speed is in consequence of their absorbing so much water, that they get sogged, heavy, and dull. All vessels regain, in some degree, their original good qualities, after being some time in dock; still, on the other hand, I believe it is generally admitted that when you wish to obtain all possible speed out of a vessel, that her shrouds and stays should not be too taut, because when chasing by the wind, you cannot get your yards so sharp up in the first place, and in the second place, if the rigging were over taut before the yards were braced up, it would become still more so afterwards, by the long lever of the lee yard-arm pressing against the rigging. When a vessel is going free, as her hull is the object to be propelled, all studding-sail tacks, and other ropes with sails attached to them, would be better made fast to the vessel's hull, than through leading blocks attached to the rigging for that purpose. As vessels pitch more than they scend aft, the practice of suspending butts to the stays, and slinging weights to the decks, may have originated from the idea, that the vessel being thrown forward with greater force than aft, the weights would give a tendency to throw the masts forward at the same time, and add to the effect in assisting her head-way.

On using stream or spare cable to attach floats to, for floating vessels off shore.

When a vessel gets on shore, and cannot be hauled off, but must have recourse to floating off, her stream cable might be

made most useful for the purpose of attaching small vessels to her, or floats of any kind, to raise her, and help to float her off. Even when there is sufficient rise and fall of tide to admit of getting at a vessel's keel, it is generally a difficult process to pass several parts of a large rope or chain under her keel; and as the rise and fall of tide must be very great, to admit of this, it cannot often be expected, excepting a vessel be left high and dry. In such cases, if one end of the stream chain-cable could be passed round the vessel, as close down as low water will permit, then take the two ends of the cable through the inner hawse-holes, suspending it all round by slip-ropes, and parcel well at the angles of the quarters; when everything is ready, bouse the ends taut; bit and secure both ends, attach it to the side by as many bolts or strong shackles as you think it will require to keep the cable in its place; then lash the floats to it at low water, and lash the cable well to all the ring-bolts in midships. A ship's stream cable, if well secured in the way described, ought to be strong enough to hold a sufficient quantity of floats to raise any vessel; but should it not be considered strong enough, it is just as easy to pass the cable round double, and secure.

Upon hauling a vessel off a steep shore, in a calm.

* It has often happened, that vessels have been driven, in calm weather, upon a steep and dangerous shore which has denied anchorage, that might have been saved by exertion and judgment. Cases of this kind require great animation on the part of the officers. All boats must be immediately hoisted out, to tow the ship, if possible, from her perilous situation. In the mean time, let stop-waters be got ready to run out from the vessel, and haul her off, should towing prove inef-

* Gower.

fectual. Large butts cut in halves, and slung, serve excellently for this purpose, and are used with advantage in the following manner:—let each boat have several of these half butts, and row away from the vessel with a coil or two of small rope; when the rope is out, span the boat from head to stern, and tow the half butts from the opposite gunwale of the boat, at several fathoms' distance; thus, when the rope is hauled in on board the vessel, the boat will hang athwart, and, together with the half butts, must oppose considerable resistance. To draw the vessel ahead, let the boats employed row out alternately, that one line may be in readiness to haul upon, when the other is all on board. Should it remain calm, or should there be a light air of wind opposed to the vessel's course, the sails must be furled.

Safety to vessels.

The number of abandoned merchant vessels that are yearly seen floating about on the ocean (and many of them when fallen in with, found not to have been seriously damaged), is a convincing proof, that vessels are too often deserted under a first panic, and more danger and loss of life are incurred, by the crew taking to the boats too precipitately; whereas, by a little presence of mind, so as calmly to ascertain the full extent of the injury, aided by the cool example, and seamanlike conduct of the captain, assisted by the ready obedience, and patient endurance of the crew, will generally be found more prudent, attended with less danger to life and property, and in most cases, will be rewarded by the preservation of both. *"The history of H. M. S. *Guardian* may be useful to us: after striking on an island of ice, and so damaging herself, that her ballast actually washed out, and the ship sunk in the water to the sills of the main-deck-ports, she was kept afloat for sixty days, traversed a tempestuous sea twelve hundred and thirty-

* Griffiths (page 230).

row, shoal, and dangerous waters, it would be desirable that they should cruise in pairs. I speak from experience. I was sometime employed against the pirates in the West Indies, most of which time, the *Lion* and the *Union* schooners cruised together, under the late much lamented Capt. Hobson. We were continually and successfully employed on the most dangerous and out of the way places on the Coast of Cuba, and I believe I may assert, that when on our cruising ground (from the nature of the service, and the want of good charts) that we were seldom above a week without one or other of the schooners being on shore, and frequently in situations in which one must have been lost without the help of the other. In many cases, the *Lion*, or the *Union*, was so hard and fast on shore, that the one afloat was obliged to take up a position right astern, with all her anchors down, and all cable out, and heave her off by main strength, and frequently obliged to remove every thing out of her, even to the crew, and in some situations in danger of losing both vessels. You may therefore suppose what either of these vessels would have done singly, when we found so much difficulty with the greatest assistance from each other; and on several occasions this service had to be performed under the fire of the pirates from the shore.

How to kill the Auger-Worm.

This worm continually infests the bottoms of boats, I believe, in almost all tropical climates; and so active are these worms, that they have been known to destroy boats in a few months. Hoisting in and up boats every night has no effect on them, for during the night in a tropical climate, the wood rather inclines to keep damp than otherwise; and, as usual in vessels of war, the boats are hoisted up at night, and lowered down early in the morning, when the worms descend to their native element, and in the afternoon they ascend with sufficient salt-water in their holes to keep them alive until the morning, when they take another lease of their lives, and so on they continue working by day, and managing to exist at night, until they get their bath of life in the morning. To prevent this, I should recommend using the boats by turns as much as possible, so as to keep each boat two or three days out of the water, to let her bottom get perfectly dry: thus of course, in drying the wood, you would kill the worms at the same time. When this is perfectly effected, then give the boat's bottom a good coat of coal-tar, or paint, which will perfectly destroy any worms that may have the least signs of life in them. I have tried this plan frequently, and never once found it to fail.

By the wind.

We frequently see a ship beautifully balanced under topsails, courses, top-gallant sails, jib, and driver, in a moderate breeze, not carrying more than a spoke or two of weather helm; but let the wind increase under the same sail, perhaps even with one or two reefs in the topsail, you will then see that the ship increases her weather-helm in proportion to the immersion of the lee-bow, the weather-bow being so much out of the water, that it meets with little resistance, conse-

quently, the formation of the lee-bow presses the ship's head to windward, hence, very often arises the cause of weather-helm. I have several times, under this impression, furled the fore top-gallant sail, and found the ship to carry less weather-helm, and with a reef less in the fore-topsail than the main, still less weather-helm.

Watering.

If in watering, you are obliged to roll your casks a great distance, and over ground that will damage the casks, it will be desirable to fit two grummet-hoops on each cask, made of old two-and-a-half or three-inch rope, and drive them sufficiently near the bilge-hoops to insure the staves of the casks not touching the ground. The rope-hoops should be driven on while perfectly dry, if possible, and well wetted when on; this will in a great measure insure their keeping in their proper places. I have seen this method tried on several occasions, and it answered very well; but should there be any fear of the grummet-hoop slipping, a few small stops will rectify the evil.

On relieving wheel, lead, look-out, &c.

In cold weather, it would be desirable to relieve the wheel, lead, look-out, &c., every hour; and to insure this being strictly done, the mate of the watch should report all being relieved, at the end of each hour, to the officer of the watch. In some ships, an apron is kept in each main-chains for the leadsman during the winter season, and painted canvass coats lined with fear-nought for the look-out men, and man at the wheel. For the leadsman, I have seen petticoat trowsers used, and answer very well for that purpose, as they throw the water well clear of the men's trowsers. Coats with hoods attached to them cannot be recommended for the look-out men, wheel, &c., as they prevent the men from hearing; a good south-

wester, or a tarpaulin hat will answer every purpose. I have heard of a celebrated officer, when commanding a frigate on the Down's station, where the lead is in constant use (and severely trying to the men during the winter), having a cask with one head out, and cut to suit the purpose, lashed in each main-chains, which perfectly secured the men from falling overboard, and kept them quite clear of the lead-lines.

Water-line.

In the present day, you do not often see a vessel of war with a water-line, still, many officers are of opinion, that it adds much to the appearance of vessels with a single tier of guns, but in whatever degree it may be thought to add to appearance, it cannot be considered a desirable thing for a vessel of war to have a white ribbon running along her whole length, just above water, as a mark for her enemy's shot, more particularly when you take into consideration, that the class of vessels which it is said to ornament, has little or no means of stopping her shot holes from the inside. There can be little doubt, that in the present improved state of gunnery in most of the Navies of the world, that if the white streaks, which tend so much to mark out the exact vicinity of the men at their quarters, were obliterated, previous to going into action, that the enemy's fire would not be quite so certain, for the want of an object to confine the sight to. If this has not been already tried, it might be worth a few broadsides, to ascertain with certainty, whether a vessel painted wholly black, or of any one color, gives the same chance to the captains of the guns of striking any particular part of the ship with the same precision, that they could with the white streaks. However it may be, I have formed an opinion, that in flush vessels, more especially, many shots would go over a vessel's hull, if it were not for the streak to direct the fire by on most occasions.

On working one watch against the other, or one part of the ship against the other.

When anxious to get any duty done quickly, more particularly with heavy work, if the watches are worked against each other, it generally creates great emulation between the watches, to see which watch will beat the other; and this is more evident when hoisting out or in boats both sides together, or in running the cables up, one watch against the other (when clearing the tiers, &c.) The nearer the work to be done can be equalized, the better the spirit of emulation will be felt; and any one who had not seen the spirit and animation of a ship's crew when the credit of their watches is at stake, would hardly believe the activity and zealous anxiety shewn by a ship's company on such occasions; and the same spirit continues when working one mast against the other, in swaying up lower yards and topmasts, shifting sails, masts, or yards, reefing topsails, &c.

On weighing with a free wind.

Under these circumstances, if you have no danger in your way, instead of making all sail for casting, when you have a long stay, it will generally be found much easier to weigh the anchor and run the ship under the jib, until you have catted and fished the anchor; by this means all your square sails will be set much easier than when the wind is right ahead, as it saves that incessant footing the sails out of the tops, clews of the top-gallant sails getting foul of the cross-trees, sails binding against the caps, and thereby endangering their splitting, &c., are avoided. I have always been under the impression that you can weigh your anchor much easier, and cat and fish it better before making sail, than by the contrary practice; and that the sails are set with less hands, and quicker, when the ship is before the wind, than can ever be done while riding head to wind.

Weighing, with a heavy head-sea.

When obliged to weigh with a heavy head-sea, do not make sail if you can help it, until the anchor is up, as under these circumstances such sudden jerks are continually brought on the capstan, as to require all the palls to be down; and even then the cable is sometimes hove in with great danger to the men at the bars; but when you add to this, the force of the sails in a fresh or strong breeze pulling against the bars, the danger is then much increased. We have, unfortunately, known several men much hurt in this manner when sail might have been set quite as well after the anchor was up; but if you are obliged to set topsails before weighing the anchor, they had better be kept on the caps, the yards laid for casting, and the sails hoisted as soon as possible after the anchor is up.

Meeting a wreck at sea, and blowing too hard for any boat to live on the water.

Her Majesty's ship *Cleopatra* was placed in the above situation off Flamborough Head, October 26th, 1835. At noon, latitude 55° 30′ N., longitude 0° 5′ W.; Flamborough Head S.¼E., distance 82 miles; wind S.W., with strong gales, and very heavy squalls. At 5 *p.m.* observed a brig to windward in a distressed state, with her main-mast gone by the board, and her foresail and fore-topsail flying away in pieces. We immediately took in the storm-staysails and trysails, and prepared to render her every assistance in our power. 5.20 brig passed under the stern, and hailed for a boat to be sent, being in a sinking state, brig about 200 tons, *Fisher* painted on her quarter, deck nearly flush with the water, sea making a clear breach over her decks, boats all washed away, and several men on deck. Though it was next to impossible that any

boat could swim, yet, from the highest sense of duty and humanity, Capt. the Hon. George Grey was determined to leave nothing untried that could give the slightest shadow of hope; the lee quarter-boat was manned, and the end of a good hawser placed in her, ready to render the brig assistance. The steadiest time was watched, and the boat lowered, but sad to relate, she was hardly in the water before she was swamped, and several times heavily struck by the lee quarter, consequently stove and lost; fortunately no lives were lost, but several of the boat's crew were severely hurt. The stern-boat was next tried, but she could not be lowered from the heavy sea, and the pitching of the ship, it was found impossible to send a boat; veered a buoy astern, and wore several times to place the buoy in a position for being picked up by the brig, but she was unable to do so. Coming on dark, we hailed the brig, to say we would keep by her during the night: wore occasionally, to keep close to the distressed vessel, in hopes of taking the first opportunity of the earliest lull to render her crew all possible assistance. Hoisted a light. About 6.40 *p.m.*, strong gales with very heavy sea, much to the sorrow of every one on board, the brig suddenly disappeared, which left not the least doubt of her having sunk, and every soul on board having found a watery grave. As the gale and heavy sea continued during most of the night, it would have been impossible for a boat to live, to render her any assistance, had she not unfortunately sunk when she did. Nothing could exceed the extreme anxiety of every one on board the *Cleopatra* to do his best to render all possible assistance to the crew of the unfortunate brig *Fisher*. I have often reflected on this painful and melancholy subject, and the result has been, that under similar circumstances, in my humble opinion, I think it would be desirable to lay your ship to windward of the wrecked vessel, placing ropes in every direction fore and aft on the lee side, then hail, or make some sign to the disabled

vessel, informing her crew of your intention of drifting over her, and that the ropes are put over the side, yards, &c., with the hope of saving the crew. I think this desirable object might often be effected, when the disabled vessel is much smaller than the one rendering assistance.

When rolling heavy with the wind right aft.

When a ship is running for her port, &c., with the wind right aft, and labouring much from rolling heavy, many good seamen keep their ship up a few points on either side, to steady her, and continue to run equal distances on each side of the ship's direct course. In doing this, the ship's rolling motion is considerably lessened, by which means the wear and tear of the ship's hull, masts, yards, rigging, and sails, are much diminished, besides the difference in comfort to every-one on board. It is supposed that ships will generally make more direct distance in this way than if running directly before the wind, as in that position the sails are only useful on one mast; and when a ship is receding directly from the wind, the sails lose much of their propelling power on the ship in consequence. But when a ship brings the wind on her quarter, she may then nearly double her quantity of canvass for increasing her speed, and as the ship will not recede so directly from the wind, all her sails will then have increased power for propelling the ship; therefore, when vessels are rolling heavy with the wind right aft (and nothing to prevent it), it would be desirable to bring the wind sufficiently on one quarter to keep her steady. As by this method the chances appear to be in favour of increasing the ship's direct run; but even should it rather decrease her run, the safety of the ship, and wear and tear of almost everything on board, ought to be taken into consideration. We know some officers who think so highly of this method, that they feel quite convinced that

a ship taking this plan would arrive at her destination long before the one that had the wind right aft, provided the wind continued the same, and the vessels were equal in sailing.

*A plan for quick wearing or staying.**

(From the Nautical Magazine, for October, 1846, *Pages* 519, 520.*)*

Sir,

Being a constant reader of your valuable publication, I beg to submit to your notice a simple plan for wearing or staying a ship, in a shorter space than by the ordinary method. I have tried it with wonderful success in the Straits of Magellan, and I think, were it generally adopted, it would be the means of saving many a ship from a lee shore, or worse fate, especially when they have canvass enough set to stay, and doubtful of room to wear. It consists merely in having stout line made fast to the end of the jib-boom, and leading along outside to the waist or quarter, to the end of which is attached a conical canvass bag, capable of containing any quantity of water, according to the size of the ship, or depth of water she may draw; and, for example, suppose a ship in thick weather and blowing hard makes the land, *sooner than was expected,* (which is I am sorry to say too frequently the case) she has not canvass enough set to stay, and would lose too much ground if wore, then by this simple method she might wear in quite as short space as she would stay. There is not the least trouble attending it, for by having a line bent on to the end of the bag, one man may haul it on board; and the expense of making it would be, a few yards of No. 1 canvass, as any

* I could not resist the insertion of this article, as I have every reason to believe, if stop-waters were more generally used on such occasions, that vessels would be more frequently rescued from perilous situations. When the application of the sea-anchor, and stop-waters, generally, receive more of the attention of seamen, ships will then have a much greater chance of safety.

sailor-man, who can use his palm and needle, may manufacture it; and what trouble is there in having a studding-sail or tack halliard bent on to the end of the jib-boom, and led along to the quarter, to be ready for any emergency?

The first time it occurred to me was in the Straits of Magellan; and the first time I tried it, was leaving Kemple Harbour (on the Terra del Fuego side), and just getting clear of two islands (Dos Hermanos), it came on suddenly to blow hard from the N. W., and having a poor offing, found it necessary to stay; but finding she would not come round, I immediately bent on several swabs, and an old canvass drawbucket to a line that was towing alongside from the jib-boom end (having been obliged to use it in towing out of the harbour). I then ordered the helm to be put up, and so great was the check given to the ship, that she was round before we could get the yards trimmed. I ever afterwards adopted the plan in the vicinity of land, and never found it to fail my expectations.

It may be used with effect in getting underway, and wishing to cant, in a manner, that if canvass were set it would be dangerous.

I remain, &c.,

G. M.

Nelson-street, St. George's-square.

"Our correspondent has sent us a sketch with his letter, but as the article in question may be described as a large canvass extinguisher, with a wide mouth, it is unnecessary to illustrate it with a cut. His description is lucid enough without it, but we may add, that the mouth of the extinguisher or bag should be fastened to the rope which it is intended to haul on, by at least four good strong lines attached by way of nettles, so that it may be spread fairly by being hauled

on, and resisted by the action of the water. We recommend it to the attention of our naval officers. But there are more purposes than 'wearing or tacking,' to which it may be applied. A machine of this kind dropped from the sprit-sail yard of a ship becalmed, and hauled on by a rope led to the quarter, would at once turn her broadside to any desired direction. Again, why may not two of them be employed in the same manner, and both being hauled on, there is at once the means of getting way on a ship in a calm, which on many an occasion has been desired. To do this effectually, they should be dropped from the sprit-sail yard-arms, hauled on by the ropes leading in-board at the quarters, and be lifted out of the water when they are aft, and roused forward again clear of the water in going forward, a process which can be effected readily enough by the rope fast to the pointed end of the bag. Perhaps the mouth of the bag might be kept open, when in use, by a couple of stretchers crossing each other on an axis passing through their middle, and opening at right angles, and closing into one when in use. A well managed arrangement of this process is well worthy of trial in both of these important conditions of a ship. It has the recommendation of being inexpensive, and easily made on board. In our opinion, it would be attended with success, and our seamen are the right hands to try it."—*Note by the Editor of the Nautical Magazine.*

Yards Squaring.

Though the squaring-marks of the lifts may be perfectly right, if the yards are not exactly in midships, the yards will not be square, and the more they are out of that position, the less square they will be. We have seen marks of lifts continually altered, when the fault has laid in the yards not being exactly in midships. If this were more attended to, you might better depend on squaring-marks.

Yard-tackles.

There are two opinions about the yard-tackles being on the yards, some officers think, that the yard-tackles and stays can be triced up equally well together, others think, the proper place for the yard-tackles is on the lower-yards. When the yard-tackles are on the yards, they must be at hand, but when both yards and stays have to be stowed away on the booms, or in the boats, they are often found in the way, consequently, put out of sight; but when the yard-tackles are on the yards, there is no difficulty about stowing the stays away in one of the boats, or on the booms: many serious accidents have taken place from the yard-tackles not being at hand when required in cases of emergency. In small vessels, it may not be so convenient to have the yard-tackles fitted on the yards, but in large vessels, it must be considered desirable to have the yard-tackles always on the yards, in fact, a ship of the line does not look ready and warlike without her yard-tackles aloft.

DISCIPLINE.

Black List.

There are few things on board ship that require such incessant looking after, or are so difficult to manage, as a black-list. While men are in that list, it would be well not to give them any charge, or place of responsibility; if any of them belong to boats, &c., they should be removed for the time, and it would also be advisable to exclude them from all working parties out of the ship; and when found troublesome to get them to make or mend their clothes, it should be done under the sentry's charge. Closely examine the black-list of most ships for the time they have been in commission, and you will generally find the same names over and over again. To make a black-list useful to the ship, and the good part of the crew, it should be employed for all small jobs which are obliged to be done at meal times, cleaning the pump-well, &c.; in fact, all dirty (but indispensable) jobs, should be done by them. There should be several gradations of the black-list, and to the last gradation should be added, eating their meals under the sentry's charge. Few people know better than seamen, that when good order and discipline are too much relaxed, that moment the good men have to do double

duty, to make up for the skulkers and the idlers. We have continually heard the best seamen express their thorough dislike to being in a ship where good order and discipline were not kept up. The common expression of the best seamen is, "give me a ship where every man is expected to do his duty, that is the ship for me."

Discipline.

The good conduct, regularity, and man-of-war-like smartness of a ship's company, to be lasting, must depend much upon the good example shewn them by their captain and officers: if the ship is well commanded, well officered, and the ship's company what British seamen and marines ought to be, the same strict attention to duty, and obedience which the ship's company observe in their officers to their captain, and in each officer to his superior officer, will then run throughout the crew; and if a captain be so fortunate as to have officers who feel the full force of this desirable object, he has then the best groundwork for insuring a good system, with firm, but mild discipline. In ships where officers vie with each other in the spirit of emulation, in the smartness, good order, and cleanliness of the different parts of the ship committed to their charge, the crew soon enter into the feelings of their officers, and feel a just pride in the magic-like way in which everything is done by combination and system, all things working to the same great end, a firm, but mild discipline, and a perfect state of efficiency. The first object is, the prevention of crime; and the certainty of detection is far more important than the severity of punishment. The more the Admiralty feel it requisite to curtail coercive measures, the more imperative it becomes on the part of the officers to increase their zeal and readiness at all times for the good of the Service; for as the power of punishing is restricted, vigilance must increase, to supply its place, or good discipline will disappear. The cha-

racter and good discipline of the Service have become gradually more dependent on the tact and discretion, as well as the zeal of the captains and officers: and the changes of recent times, while they have greatly limited the power, have also largely added to the difficulties and responsibilities of their duties. It is therefore by increased exertions on the part of the officers of the Navy, that discipline can be maintained in efficiency. Those who cavil most at the orders of their superiors while they themselves are in subordinate situations, are almost invariably the most tenacious and overbearing to others when in command themselves. The heart and soul of all good naval discipline is, strict obedience to orders; and when any officer habitually deviates from this principle, whatever his rank or abilities may be, he cannot be considered of any value to the public service. To insure the *morale* of the navy, officers are now called upon more than ever, to be scrupulously careful in their conduct; as captains and senior lieutenants in the present day, have quite enough to do to uphold the discipline of their ships, considering the responsibility attached to them, without having to contend with insubordination from those who are expressly appointed by the Admiralty to assist in carrying out all things for the good of the Service with energy and zeal.

Police of a ship of war.

I know of nothing in a ship of war so susceptible of improvement as the police department. At the head of this department you have the master-at-arms, who, by-the-bye, nine times out of ten, knows very little about the management of men. The extreme difficulty of obtaining anything like a good master-at-arms must be well known to all officers who have had much first lieutenant's duty to do. Officers generally consider themselves well off, when they can get a person

who has been accustomed to the duty before. I can very well recollect when an old pensioner-sergeant used to be considered a great prize for this situation. If the duties were generally better fulfilled in ships of war, it would go far to decrease punishment; at present, this situation is not made sufficiently desirable for any one to accept of it, who is in the slightest degree above the common run of men. A master-at-arms should have a good plain education, be good tempered, yet firm, clear sighted, and vigilant: he should understand the management of men, and have a knowledge of the working of the human mind. Considering the great importance of a well regulated police on board ships-of-war, I have often been astonished to see what inefficient persons officers are sometimes obliged to place in this very responsible office. I fear we must form too high an estimate of human nature, if we do not admit that the master-at-arms of a ship of the line (or even much smaller vessels) has enough to do to keep the men orderly, more particularly when the hands are below at meal times, &c. At such times, you will generally see a good master-at-arms continually on the alert, to put down any squabbling before it reaches to blows, checking men who are about to commit themselves in many other ways, before they have time to do wrong: in fact, generally speaking, nearly half the complaints on board ship go through the master-at-arms; therefore, one may suppose how much care should be taken in the selection of a person to fill a situation from which so much must be expected. I have known on several occasions, after the ship has been at sea, that officers have been obliged to pick one of the men out of the crew that they thought would answer best for the purpose. How many unnecessary complaints will a good conciliating person in this situation save; how many heart-burnings will he prevent, by giving the young and thoughtless part of the crew, now and then, a timely warning, to keep them out of scrapes. More

of the good conduct, and regularity of the ship's company, when below particularly, depends on this officer, than we are generally inclined to think; and he ought to have all the countenance the Service can give him, to enable him to do his duty with the strictest justice and kindness. There are many temptations thrown in his way, and if he is not a man of strict integrity, he not unfrequently falls a prey to them, and connives at all sorts of breaches of discipline. From that moment he loses his authority, and becomes worse than useless in the ship, as far as keeping the men in order by anything but force; but who does he then use his force upon, none but the helpless, not daring to offend the men whom he fears will expose him. He has it in his power to connive at numberless acts of insubordination: how often have we known the master-at-arms to allow the midshipmen, or warrant officers' lights, to remain in after hours for the bribe of a glass of grog. I have long been of opinion, that in large ships, and more especially ships of the line, it would be advisable to put these officers on a much better footing than they are at present. To make certain of these duties being strictly attended to, you must make the situation too good to lose. After having taken the most efficient of the present master-at-arms, it would be worth consideration whether a good class of these officers could not be supplied from the most intelligent of the sergeants of the Royal Marines, who have been much employed afloat. If the Admiralty could arrange to appoint a good master-at-arms to each ship when first commissioned, it would tend much to insure good order, and the proper management of leave. At present a ship is often nearly manned before she can get a supposed proper person to fill this rating; and even at that late hour, if one can be procured, it remains to be proved whether he is trustworthy or not.

If efficient officers could be appointed to fulfil this duty

it would be an immense advantage. This situation should never be given to anyone but from real ability to fulfil the duty well; and of all appointments on board a ship of war, interest should have nothing to do with this. The masters-at-arms should be chosen entirely from their true value for the good of the Service in that department. With our present police, men have not the same dread of being turned out of the Service that they would have with a more efficient system. It is now no uncommon occurrence for a man turned out of the Navy for bad conduct from one ship, only to alter his name, and perhaps his appearance a little, and join another of H. M. Ships immediately; this is a thing too well known by most officers in the Service to admit of the slightest doubt. In this way bad characters are perpetuated in the Service with impunity, or nearly so, to continue the same bad habits from one ship to another, to the great injury of the Service. If the situation of master-at-arms were better filled, such characters would be more afraid of making a second attempt to impose on the Service. At present, I believe the description of such men is copied into the order book, and seldom or ever seen by anybody, more particularly by the master-at-arms, the person above all others whose duty it ought to be to prevent these disgraced people from again entering the Navy. The master-at-arms ought at all times to have access to the description of the men discharged from the Service for bad conduct, and deserters from other ships; these subjects are purely in the police department, and ought to be intrusted to him. If a master-at-arms were appointed to each ship on first commissioning, it would prevent many disorderly practices which continue to go on for the want of a better police while fitting out, such as the wholesale way in which the government beds, blankets, and clothes are smuggled out of ships, for sale. If it were not for the easy way in which these things can be now accomplished, these robberies

on the Government, and desertions, would not be so frequent. The more the Admiralty find it requisite to curtail punishment, the more requisite it will be to have a man of greater intelligence at the head of the police; a man who, by his manner, position, and abilities, can command respect and obedience, without taking every trifling complaint to the first lieutenant, with the view of showing his importance to the ship's company. If the situation were improved in these respects, and only made eligible to active, well-informed men, after the first commencement, there would soon be a well-organised and effective police for Her Majesty's Navy. In large ships, if the master-at-arms had a store-room, it would be beneficial to the Service, as all things found about the decks would then be in his immediate charge. He would then also have a place to put away things of consequence that liberty-men might like to leave in his charge before going on shore. At present, the position of master-at-arms is so doubtful as to rank, that the ship's company generally, do not know whether to "Sir" him or not, when speaking to him, or of him. As the Admiralty are so laudably anxious to make a nursery for seamen for the Navy on board of our own ships, by giving to each ship an additional number of boys to be brought up for the Service, nothing will assist the Admiralty more in their views than a good and efficient master-at-arms, to attend to their moral conduct. A good though strict, yet conciliatory man, will be much looked up to by the ship's company; whereas an arbitrary and inefficient one will be despised. Whenever dissatisfaction gets into a ship, the manner in which these duties are performed, should be narrowly inquired into, as this office being well or badly filled, has the greatest possible influence on the comfort or discomfort of a ship's company.

System.

What is system? A thing often talked of, but seldom un-

derstood. System is neither more nor less than a consistent line of conduct, which must be observed and followed up with firmness and perseverance; unremitting, undeviating. System, or rather the object of system is, to give strength and vigour to the constitution as it were, of a ship of war; to have a line of duty laid down in such a manner as to allow no excuse to be made by any individual for a deviation from it. To impress their minds with a certainty of punishment in case of such deviation. To be able to point out, in any situation at any time, where neglect may take place, the very person who by station, order, or otherwise, may have been in fault. But the principal end is, to let every man understand that he will not be reprimanded or punished for other people's neglect; that as long as he does his own duty he is out of danger; and by a certainty of punishment for every delinquency, to render its infliction equally dreaded and rare.

The particular rules and arrangements must of course be of consequence, but when any are thus steadily pursued, and with these ends in view, though imperfect, it will upon the whole be far preferable, and more effective, than a system more perfect, that is less steadily and consistently pursued.

To follow out any system satisfactorily, requires great command of temper, impartiality, judgment. And it is important to avoid giving any annoyance to people's feelings, except where punishment may be really necessary. But the great object which should be the principal study of every man of sense, when placed in the situation of a captain or a first lieutenant of a ship of war, if he wish to have a ship's company upon whose exertions he can depend when out of sight, is to impress them with a certainty of detection and punishment for every offence (of course in proportion to its magnitude); this will effectually prevent frequency of crime, and in the absence of unjust treatment and unmerited abuse, will inspire the crew with confidence, and at the same time peremptorily demand

from each individual, attention to his own duty; for which, if left undone, he knows no one but himself will be held responsible. But in every evolution of importance, it is necessary to have each duty understood as belonging to certain persons, who in case of neglect may be sure to be called on. Indulgence and comfort (the first ends being produced), should be the next point demanding the attention of the officer; and the farther these can be conceded, taking care that no abuse of such indulgence shall be permitted, which not only causes it to be undervalued, but the disposer of such indulgence to be treated with contempt.

NOTE.—This article was written by Captain the Honorable Joseph Denman, when he was a midshipman, and came into the author's hands during the time that talented officer and himself were shipmates, about fourteen years ago.

On corporeal punishment.

In ships where the police is inefficient, or not well regulated, the black-list often tends rather to increase corporeal punishment than to diminish it. A black-list must always more or less break in upon the time and comforts of those who from bad conduct, have placed themselves in that position; and in most ships it is arranged so as to have much of the dirty work done by the black-list men, and also all duties which must be attended to during meal-times; in this way the badly conducted are made to do unpleasant duties, which would otherwise have fallen on the ship's company in their turns. The very nature of a black-list, in a great measure, inclines to sour the temper of men, as they continually see their messmates taking their meals comfortably, while they themselves are called away for some duty. Now, under these circumstances, if the master-at-arms, or ship's corporal in charge of the black-list, has not a knowledge of the manage-

ment of men, some of them will often become insolent, in consequence of which, corporeal punishment not unfrequently takes place. Whatever people unconnected with the Navy may think of corporeal punishment, both seamen and marines will often, when only undergoing a short black-list punishment, go on committing themselves, with the full intention of endeavouring to get flogged, that they may then get clear of the black-list. With an efficient police well regulated, black-list, and the late introduction of solitary confinement, there can be no doubt but corporeal punishment will be much decreased, more particularly in harbour; but as the Navy is a Service where such prompt and decisive energy is required, every substitute short of corporeal punishment will be sometimes liable to the fault of being too slow to insure an immediate example to a ship's company. In extreme cases, the sooner punishment follows on crime, the more likely others are to be deterred from its bad example. If a man were to be extremely mutinous, sending him to be confined in prison would not have the same effect, as an example to the ship's company, that a well considered and justly inflicted flogging would have. There are many situations in which a ship may be placed, in which confinement to prison would only be a release from hard labour and privations (more especially at sea). Even under these circumstances, examples must sometimes be made; but that of confinement cannot be considered a good one at such a time, as it will take from the number of working hands, and do very little good as an immediate example to the ship's company. In fact, it would rather be holding out an advantage to skulkers, on such occasions, if corporeal punishment were not held in reserve, and sure to follow in extreme cases. After much and serious reflection on the subject of corporeal punishment in the Navy, I feel reluctantly obliged to acknowledge, that all the substitutes for corporeal punishment I have ever seen used in the Navy

for keeping up good discipline, have fallen very short of a limited, conscientious, and judicious use of corporeal punishment. Officers in the Navy are generally much averse to flogging; but at the same time they are well aware that there must be some extreme mode of punishment after all minor trials have failed. I hope that I shall not be considered for one moment to advocate corporeal punishment beyond the most limited means for insuring a good state of discipline in the Navy; at the same time I candidly acknowledge, that it is my firm opinion, if corporeal punishment were abolished, and nothing but the present substitutes left to uphold the good discipline of the Service, that they would be found to fail to a greater extent than it is at present generally supposed. The feelings of naval officers generally, are strongly in favor of diminishing corporeal punishment as far as good discipline will permit: but those gentlemen in and out of Parliament, who are so continually pressing the Admiralty to abolish corporeal punishment in the Navy, would be the very first to raise an outcry against the Admiralty, and officers in the Navy generally, if its discipline and good order were diminished. It is said, that though England is the greatest maritime nation in the world, yet those who are not really connected with naval affairs in this country, understand less on this subject than the people of most other countries. For a black-list to work well for the reduction of corporeal punishment, the police of the ship must first be good, and work well itself. When a black-list becomes too large for the proper superintendence of the police, it will generally be much better to discharge a few of the best conducted, even though their time may not have expired, than to run the chance of further bad conduct for the want of proper superintendence; in fact, it will be found advisable to keep this list within a certain limit, and by allowing the master-at-arms to recommend the best conducted for release, you strengthen his authority, and

consequently render the men more obedient and attentive to his orders, and more easy to be managed. A black-list badly managed, and more particularly a large one, creates much dissatisfaction in a ship. Whenever a ship's company find that a commanding officer delegates the power of putting men in the black-list to anyone beyond himself, such as the lieutenant of the decks, mates of the decks, hull, &c., it gives the greatest possible dissatisfaction, as they feel that they are punished without their conduct being investigated by the proper authority. This method of delegating the minor punishments to others, is extremely destructive of all good discipline, as much bad feeling is excited by it, which will surely, sooner or later, produce a general discontent. If the watch on deck do not work well when required, more particularly during the night, it will be quite requisite that the officers of the watches should have the power (but used with great judgment) of setting or taking in sails, until they are properly set or taken in: but an officer of the watch far exceeds his duty, when he takes upon himself to punish men beyond a few hours on the gangway, for faults committed in his night watches. I mention this subject, from having known officers who tried to justify their conduct on such occasions. In the present day, ships' companies are fully aware of the power invested in their officers, therefore, if any undue use is made of their authority, it tends much to weaken good discipline, and injure the captain's character for justice: as the captain is the responsible person for the good discipline of his ship, it is not only a breach of discipline for any officer to award punishment of any kind, without the express authority of the captain; but it is also not just towards him, as the captain is made responsible to the Admiralty for that which is done without his knowledge. Whenever a ship's company becomes dissatisfied, it will be well to give this subject a careful examination, as nothing creates more bad feeling in a

ship of war, than any unauthorised punishment. In many cases, officers of watches carry the punishment of offences committed in their watches, to two hours' look-out, or two hours on deck in the next watch; this cannot be considered right. Good discipline will never permit the power of punishment to go beyond the captain and the senior lieutenant. No corporeal punishment should take place without being fully investigated by the captain; and no black-list, or other punishment, without being fully investigated by the second in command, and then not without the sanction of the captain; but where so many officers take upon themselves the power of awarding the minor punishments, the ship's company soon become gloomy and discontented. When a ship's company know that all complaints are fully and justly investigated, and that everything is fair and above-board, that the same law is dealt out to both officers and men with an even-handed justice, and the "cat" only brought into operation for the purpose of establishing a firm, though mild discipline, you invariably find a willing, cheerful, and orderly crew. The best conducted seamen in the Navy will now candidly tell you, that in ships where the cat is not used on proper occasions, that they are the most uncomfortable vessels to sail in, as the willing and hard-working men do the work of the lazy ones; therefore it seems to me impossible that corporeal punishment can ever be entirely abolished in the Navy. Few things have a better effect on the bad part of a ship's crew, if done with great discrimination and after much and serious investigation, than when a man is turned out of the Service for extremely bad conduct; this has the effect of showing them what they little dream of, that the Navy can very well do without the services of bad characters. I have seen bad characters perfectly astonished when they found that their conduct would no longer be tolerated, and that they were turned on shore as outcasts, unworthy the character of a man-of-

war's-man. Such characters now and then require a check, therefore, when this is done, it prevents others of that stamp from over-valuing themselves; and some are even made to retrieve their characters when they find that their conduct will not be borne beyond certain bounds. Sea-going vessels are invariably in better order when at sea than in port, and the list of all punishments decreased to half. This must arise, in some degree, from both officers and ship's company being all on board, and in their proper stations, when at sea, and their undivided attention given to their various duties; but when a vessel goes into port, it too often happens that many of the officers in their anxiety to have the first chance of going on shore, make the duties of the ship a secondary consideration, so much so, that often before the sails are furled, and the ship secured, numerous applications are made for permission to go on shore; this cannot be right—duty ought to be first, and pleasure afterwards. I have a great idea of giving leave to the fullest extent, still not so far as to allow such a noble and beautiful work as the discipline and system of a ship-of-war to suffer for want of proper attention from either officers or ship's company.

Nothing demoralizes a ship's company more than allowing liberty spirits, or liberty beer on board; this is generally the forerunner of drunkenness, fighting, quarrelling, &c., and if it should ever unfortunately be allowed, it will be considered a grievance when it is thought right to discontinue it. Prevention of crime should always be the great object of every officer in command, therefore, boats hoisted in and up early should be strictly attended to. Boats not hoisted in and up, have often been too strong a temptation for even sentries before now, in a close harbour, with numberless public-houses near the ship: boats should on no account be left carelessly at the guess-warp-booms, or astern after dark, excepting for particular service; for this slovenly practice not only offers tempta-

tions to the ill-disposed part of the ship's company, but gives bad habits to both officers and men, besides injuring the boats. In ships where this bad habit prevails, spirits are often smuggled into the ship to a great extent, and consequently, drunkenness and insubordination ensue. If ill-disposed men know, that it is the habit of a ship to leave boats down at night, it not unfrequently tempts men to take French-leave, and greatly facilitates desertion with clothes, &c. From its being the habit to leave boats down, they have time and certainty to mature their plans; but in ships where boats are hoisted up, at whatever time at night they return, no such attempts are likely to be made by anyone on board, certainly not by means of the ship's boats. I cannot avoid reiterating that the great object of every officer in command ought to be the prevention of crime as much as possible; but when punishment is fully deserved, and example actually requisite for the good of the Service, no false philanthropy should induce an officer to forget what he owes to the good discipline of the navy. When working parties are employed on shore, out of public establishments (which is often done merely for the purpose of having clear decks, or giving the ship a neat and clean appearance) many bad habits are engendered, such as selling clothes, making away with H. M. stores, and many other *et ceteras*. This measure should never be resorted to but in cases of necessity, and it may be usually avoided by doing the work on board, which will often save time, trouble, and much vexation. By showing a marked consideration for the working petty officers, you raise them in the eyes of the ship's company, and thus render the crew more attentive to their orders. It often happens that when the nature of the Service will not permit general leave to be given to the crew, still it will have a good effect to let a proportion of the working petty officers go on shore in their turns. I have oftened remarked the conscious feeling of pride of situation in the petty

officers when standing at the heads of their divisions, or parts of the ship, while mustering clothes, hammocks, &c. to think that their situation was a sufficient pledge that everything would be right on their part; and from what I have seen of intrusting the petty officers on such occasions, have little doubt, that by degrees they might be much further intrusted. When a complaint is made of a man, if you send for the petty officer of the part of the ship to which the man belongs, and let his opinion have some weight as to the character of the man complained of, it will do much to make the petty officers respected. As complaints are frequently made, more or less, under excited feelings, those complaints which can be deferred until the usual hour in the morning, for investigating the complaints of the night (or at least to leave sufficient time, if possible, for both parties to cool previous to the investigation), will tend much to lessen the angry feelings between the parties, and be more likely thereby to bring the dispute to an amicable adjustment. After a night's rest, or a few hours' cool reflection, our opinions and feelings often undergo a great change on the same subject. Complaints, that nothing short of corporeal punishment would possibly satisfy the complainant, if investigated at the time, by being deferred until the morning, assume quite a different character, from time being allowed for reflection; and the complainant is frequently inclined to allow blame on his own part, and make every excuse to endeavour to withdraw the complaint altogether. Those officers who understand the character of seamen, and the management of them, will do more with them, with a very limited quantity of punishment, than others not possessing this tact, with double the amount of punishment. As corporeal punishment decreases, example, and the knowledge of the management of men, will be more required, and the more these are understood, the more safely may corporeal punishment be diminished.

Drunkenness.

Much of the drunkenness on board ship originates among the captain's, ward-room, and gun-room stewards. If therefore, the master-at-arms is not a conscientious man, it is unknown the quantity of spirits these stewards may smuggle into the ship, in the names of their masters. We knew a frigate in the West Indies, some time since, where the captain's steward was detected in selling spirits to the ship's crew; and it was proved on enquiry, that he had been in the habit of selling rum to the ship's company at the rate of ten shillings a bottle, and sometimes from fifteen to twenty bottles full in one night; and this went on more or less for nearly two years before it was detected. Could the master-at-arms have done his duty in the above case? Without the slightest hesitation I answer, no. The master-at-arms must have connived at the bad conduct of the captain's steward, or it must have been detected long before. I merely mention the above case as a most glaring one, but the number I have seen and heard of would more than fill a page. These stewards are also great receivers of slops, which they purchase from the ship's company with spirits, and then dispose of them on shore. We have seen several detections of this kind. Few people on board have greater facilities of disposing of spirits than the purser's steward, if not well looked after. We have known the following order to have had the best possible effect in keeping that department right. The order was this, that no person should take up more than his daily allowance of spirits, and if left behind it never could be repaid excepting in money, as savings are usually paid; and that no spirits above the daily allowance should ever leave the tub, without a written order, signed by the captain and the purser, and in his absence, by the commanding officer and purser; this order the officer of the tub was most strictly directed to attend to. This order worked

well in many ways, for whenever the purser was asked by any of the officers to be allowed to take up more spirits than his allowance, the answer was always ready, I cannot, it is contrary to the captain's orders. This order saved the purser much annoyance, for when it was found that no spirits could be taken up without the knowledge of the captain, or commanding officer, the purser was no longer troubled on that subject; it also entirely stopped the purser's steward from taking spirits from the tub. This order very properly shews everyone on board that the purser has no right to dispose of the spirits as he may think proper.

With drunkenness comes defiance of all laws, insolence, sickness, and a total subversion of good discipline, as good discipline and drunkenness cannot exist together. In ships where this practice is tolerated, it is doing a great injury to the men, and the Service at large. If one could only know the number of accidents, and cases of insubordination that take place from this crime, it would make commanding officers very careful in doing their utmost to prevent spirits from coming into their ships. In some ships, to preclude the chance of the different stewards smuggling spirits, or wine into the ship, by previous arrangement, no spirits or wine are permitted to come on board without a written permission from the commanding officer, in which permission is stated the exact quantity to be allowed on board. This simplifies the duty of the master-at-arms, and acts as a great check on the stewards, as all spirits or wine found beyond the quantity stated, must be considered smuggled.

Difficulties incidental to men paid off in large ships.

When large ships are paid off, it might be supposed that if any of their crews by chance fell into difficulties common to

seamen, such as losing their certificates, not being able to obtain their prize money, or wanting ships, &c., that from having served in large ships, where there are so many officers, they are more likely to have their troubles and sorrows remedied, but in reality it is far from being so, owing to the size of the ship, and the few men, compared with the number of the crew, that can have an opportunity of coming under the captain's observation, excepting at divisions, or general inspections, more particularly as a large ship is so much in port. We have known numberless cases of men belonging to such ships, when going to their captains, after the ships have been paid off for some time, stating the loss of their certificates, &c., but instead of having their wishes complied with, meet with the mortification of not being known to their late captains. We have frequently known men obliged to travel great distances, in a state of the greatest poverty, to endeavour to find some officer to whom they were known belonging to the same ship, to help them out of their difficulties. We think that officers cannot be too careful for whom they answer, or to whom they grant certificates, or recommendations; still, if each captain on paying off his ship were to take a conduct list on shore with him, having the words which denote each man's character on his certificate placed against his name on the conduct list, whether "very good,"—"good,"—"fair," or "indifferent;" if prepared with this list, when applied to by any of the crew, it would enable a captain to give a certificate or character, with justice and satisfaction to himself; and if the watch bill were added to the conduct list, it would give a very fair criterion for judging of a man's abilities as a seaman, by looking to the part of the ship in which he did his duty. The watch-bill would also tend much to freshen the memory, and bring back the recollection on such occasions. In smaller vessels, the men are better known to their captains and officers, from there being fewer of them, and coming more under

their notice; this gives a greater opportunity of judging of their characters and abilities, and from the smaller numbers, their names, and their worth, are better recollected. There is nearly the same difference between a ship of the line and a small vessel, that you will find between a large town and a village; in the former, you may live for some time without knowing your next door neighbour; but in the latter, you cannot help knowing the names of all the people, and the good from the bad.

Gambling.

Few things are more subversive of good discipline than gambling on board ships of war; where people live in such close contact with each other, the worst feelings are generated by this bad practice. If a person on shore gets into this destructive habit, he may change his company; this cannot be so easily accomplished in the confined space of a ship. I have unfortunately known several young men who might have been ornaments to the Naval Service, and society in general, had it not been for this vice. Gambling, like all all other fashionable vices, if permitted amongst the officers, will soon descend by gradations to the crew. As ship's companies have so little to amuse themselves with in long winter nights, or cold weather stations, hurricane seasons, rainy seasons, &c., it would be advisable to encourage all amusing games of skill, as games of this kind have not the same tendency to foster the destructive habit of gambling. I was in a ship where the ship's company were not only allowed to have chequer-boards, but chequer-boards were made for each mess, and it added much to the amusement of the crew; and I do firmly believe, there was less gambling in that ship for her size, than any vessel I ever served in. If any one should doubt Jack's predilection for his favorite game of chequers, he has only to go up in the tops after the ship has been sufficiently long in commission for the topmen to have a little

spare time, then after everything is right and taut, chequer-boards will begin to make their appearance, cut out in the clearest part of the tops. If you look at the tops sent to the dock-yard, from ships paid off, you will continually see chequer-boards cut out on them. My experience has taught me, that it is not advisable that this amusement should ever be taken from the ship's company while they use it properly. On writing to a very intelligent naval officer on this subject, I cannot do better than give his words relative to cards being permitted amongst the ship's company. "It appears to me, that as nearly all games of cards are games of chance, and that therefore the *spirit* of gambling is almost necessarily excited by their use, I would therefore discourage cards, while I encouraged *games of skill*. If I went afloat again, I would try to introduce chess as well as chequers, and all games of skill of that description."

Unguarded language at the mess-table.

Capt. Griffiths, in his work on *Naval Economy*, observes—"A mess is not the place for political discussions, which ever embarks great warmth of feeling. But that officers should sit down in the presence and hearing of their servants, sentinels, &c., and use disrespectful language against their superiors (particularly their captain) must at once appear so self-evidently improper, so subversive of all discipline, so calculated to produce insubordination and mutiny, that it would be idle to dwell on the subject." Capt. Griffith's opinions on naval discipline, and naval affairs generally, ought to rank high, from his sound judgment and long services. This book displays a thorough knowledge of the character of seamen; and we think there are few officers who have paid strict attention to the Service, who will question the value of his remarks. There is another point upon which it would be well if we could be also a little more careful, which is, unguardedly

making use of strong expressions relative to the ship's company, at the mess table. On first commissioning a ship, previous to the officers and men becoming acquainted with each other, many desertions have been known to take place from such remarks as the following, from some of the executive officers, while talking over the duties they have just been about. One may say, how do you get on with your party? Very well, all but John Tomkins, and Thomas Pike, but neither of them are worth their salt! The other officer may perhaps mention two or three other names, that he may describe as hard bargains, in fact, neither soldiers nor sailors: these men often hear through the servants, how their characters stand with the officers, and considering themselves prejudged, take an early opportunity of leaving the ship. This mode of canvassing the merits and demerits of the ship's company should be avoided as much as possible while the servants are about, as we know from good authority, that such remarks generally find their way to the lower-deck. In the present day, too much cannot be done to conciliate the feelings of the seamen, without courting popularity, or allowing crime to go unpunished.

Making use of threats of punishment.

Using threats of punishment to the ship's company is much disapproved of by the best disciplinarians in the Navy. Threats are sometimes uttered under excited feelings, and then punishments are threatened which ought not in justice to be carried into effect, neither would the officer think it right to do so, on cool reflection; but having publicly threatened to do a certain thing, he too often thinks himself more bound to make good his words, though much against his better judgment, than to appear inconsistent. Now should an officer, under the impulse of the moment, threaten to inflict a certain punishment, and find out on cool reflection, that he had promised

to be unjust, or too severe, he will never appear to greater advantage, than when he openly tells the man, that he (the officer) has made a mistake, and then dismiss him with some words of regret on the subject: a man so treated, sees he is safe from injustice, and that his feelings are considered, and he will in consequence, be the more anxious to do his duty. Though threatening, or bad language may soon be effaced from the memory of those who make use of them, it does not follow that the bitterness is quite so soon removed from the hearts of those to whom it is directed. During the active and exciting duties of a ship-of-war, such things do sometimes take place; but the best officers are of opinion, the less they are repeated, the better it is for all good discipline. Any undeserved or bad language takes from the high character of the officer, and with justice gives the seamen grounds of complaint, which would on every account be much better avoided. A word of advice, or a caution, may often save a man that would otherwise overstep the bounds of discipline, if not previously warned, that he had danger ahead. Many officers have the tact to observe when men are about to commit themselves, and by giving them a little timely warning, save them from doing wrong, and its consequences. In the present spirit of the Navy, those officers will advance the good of the Service most, who best understand the management of men; and this is more clearly proved in the present day, as we see those ships best conducted, and in the highest state of discipline, where tact is displayed on this point. As restrictions on punishments increase, executive officers will be obliged to give greater attention to this subject; the fear of punishment will never bring out the exertions of a ship's company so fully as the tact of a captain or senior lieutenant who understands the right management of seamen; still, no ship however well officered and manned can expect to be able entirely to lock up the cat in the boatswain's store-room. In every large society

there will be some black sheep, and no people under the sun are more ready to bring bad characters forward for punishment than good seamen.

Taunts after punishment received.

When a man has received his punishment for any misconduct, no officer or man on board ought to be permitted to upbraid, or taunt him with having received such punishment; as he has already paid the penalty of the law, he ought to be considered as beginning afresh in the ship, as much so, as if he had just joined. When it is generally felt that a man has deservedly received punishment, the ends of justice and good discipline have been accomplished, and a good example has been shewn to the ship's company; but if the same man is to be continually upbraided and reminded of his past delinquency, he feels, and justly feels, that he is unfairly treated, and often becomes stubborn, discontented, and careless of his future conduct; this arises from his thinking himself a marked man, which makes him despair of ever regaining his proper position again. Any one executive officer in a ship having the bad habit of speaking to the ship's company in this manner, may create much discontent and bad feeling. We have known, on some occasions, when desertions took place to a great extent, that on enquiry it was proved, that the great dislike the ship's company had to the ship was, because if a man had even once committed himself, he was ever afterwards a marked man. The great object of all punishment ought to be to reclaim the offender, and hold out an example to deter others from a similar course; but if you crush him by taking away the hope of raising himself again by his future good conduct, you drive him to despair, and disregard of consequences.

On officers smoking.

Whenever the officers and ship's company are accustomed

to smoke in the same place and at the same time, it by degrees induces forgetfulness of the consequences that a few unguarded remarks relative to the discipline of the ship, or the conduct of their superior officers, may have on the thoughtless, or the ill-disposed part of the ship's company; and it is admitted by most officers who are acquainted with this subject, that smoking parties at such times, do often make use of great freedom of language; perhaps this may arise from the properties of the tobacco while smoking it, as smoking is said to give a free and easy feeling, accompanied with a desire to unburthen the mind. Whatever may be the cause for inducing such unguarded expressions, the bad example is the same; and as the ship's company are generally grouped about the galley on such occasions, its bad effects travel quickly. If the officers are to be permitted to smoke, good discipline requires that they should not be obliged to smoke in the same place, and at the same time, with the ship's company; as more remarks are often overheard on both sides, than can be considered consistent with good discipline. As long as the Admiralty think it right to permit the officers to smoke on board vessels of war, it would be desirable, for the good of the Service, that the officers should have a place separated from the ship's company, to smoke in, as many evils must arise out of the practice of the officers and ship's company being obliged to smoke in such a confined space as one side of the galley.

On investigation of complaints.

The best seamen in general, have a great disinclination to make their grievances known on the quarter-deck. This in a measure arises from shyness, and the fear of being considered troublesome characters. An officer who has had much to do with the management of seamen, will soon be able to discover one who is anxious to make his complaint known on

the quarter-deck, by his backing and filling on either gangway, and making slow advances, and at last getting the mainmast between himself and the first lieutenant, or officer of the watch, in hopes that he will be asked what he wants, or some such leading question; this relieves him in a measure, of his habitual shyness, and he then commences to explain himself. If we admit that the best seamen have a great disinclination to make known where the shoe pinches them, it ought to be a much greater reason for giving their complaints a patient investigation. The very difficulty which seamen feel in making known their wishes, should induce us to give every complaint a patient hearing; for though the thing they wish or want remedied, may appear very trifling to the officer, it may be of the greatest consequence to the seamen. In ships where the crew feel that every proper attention will be paid to all their just complaints, and that even-handed justice will be administered to every one fore-and-aft, they are generally contented and happy. In a ship so conducted, the men soon find any grievance they may have, will be quietly, but firmly and quickly, redressed. This will insure all complaints being made fairly, and above-board, on the quarter-deck. But in ships where the complaints are not strictly attended to, duly investigated, and endeavoured to be removed, they are only smothered for the time; and if they do not break out in some acts of insubordination, deep-seated discontent is produced.

Smoking.

It would be difficult to find a subject that requires more gently handling, than that of smoking on board ships of war. Sailors, as a body, are very fond of smoking; and when you take into consideration their isolated position, the few amusements they have, the great exposure to the weather—blow high, blow low, a true sailor is always on the alert. How often have we seen in cold and boisterous weather, from the

urgency of the duty of the ship, the men so frequently called on deck, that their little stock of warm and dry clothing soon runs out, and this will sometimes happen without the power of remedy, from a long continuance of blowing and rainy weather. Under such circumstances, you will see Jack as happy as a prince, if he can only have his pipe to solace himself with, he then forgets his wet clothes, and every discomfort, in the enjoyment of his pipe. I have remarked that those officers who understand human nature best, have always ordered extra times for smoking on such occasions. If boats' crews are away, or any part of the ship's company employed on duty during smoking hours, it is but justice that they should have the proper time for smoking when they return to the ship. The space allowed for smoking on board ships of the line, is generally too confined; a large frigate having nearly as much room for the men to smoke in, as a ship of the line of the largest class. When men are so closely packed together while smoking, they have not the same motive to be careful, as they know as well as you do, that you cannot attach the blame of the dirty deck to any particular person, consequently without some extremely strong measure, you cannot prevent a recurrence of it. But when they have more room, they feel that they are in a measure responsible for the appearance of the place where they are smoking; and this arises in some measure, because detection is more certain. Many old sailors are so fond of tobacco, that I have known them when this article could not be procured, use their pockets in which they had been accustomed to keep their tobacco, for both chewing and smoking. The custom in some ships, of stopping a man's tobacco for punishment, does not appear to have the desired effect; for if you stop a man's tobacco for punishment, you will only bring a fresh claimant: one who did not take up tobacco before, will then take it up and transfer it to the man whom you have taken it away from as

a punishment. And as many as you punish in this manner, they will generally find people to come forward for them in the same way. I have known the question frequently put to them, "You did not take up your tobacco before?" "No, Sir, but I have frequently borrowed it, and should now like to pay my debts, and have my own to chew and smoke with," or some such answer as this.

MISCELLANEOUS ARTICLES.

Ridicule, if well applied, will save much punishment.

In the *Jaseur* we had a man who was positively so dirty in his dress and habits, that after having tried every possible means I could think of to remedy this defect (for he was really too good a man to lose in every other point), I mentioned the circumstance to the captain. He immediately said, I will soon shew you what effect ridicule will have on him; he ordered the dirty fellow on the quarter-deck every hour during the day, and a looking-glass sent for out of his own cabin, in which the man was obliged to look at himself. It was most curious to watch the working of this mild mode of punishment; the man came aft at first quite boldly to look at himself in the glass, but after the first time, the ship's company crowded the gangways, forecastle, and every part that discipline would permit, to see this novel mode of punishment, and they continued to do so, in more or less numbers, during the time. When he found he was the ridicule of his shipmates, he was fairly beaten, and came to me to say, that if he could only be forgiven this time, I should never find him dirty again. I told him, the moment he put his promise in

practice, he should be relieved from being the ridicule of his shipmates, and in a short time he became a perfectly altered man; he was certainly afterwards one of the clean ones. This man became completely changed, merely from the ridicule of his shipmates, when I feel certain the severest punishment would not have had much effect on him.

To save numerous reports.

On board of an American ship of the line, they had the following method to prevent that continual reporting which you see so general in ships-of-war. A slate was marked with columns, in which were specified the time that each of the internal duties of the ship should take place, and when they were to finish, and if not done at the time, how long after: against each of these circumstances, the officers to whom they related were obliged to put their initials. This slate took in all the internal arrangements of the ship, and when the first lieutenant wished to know what was done, or what was still left undone, he had only to call for the slate, which never left the sentry's charge, excepting when called for by the first lieutenant, or the commanding officer. The officers of the different decks put their initials to the slate without removing it from the sentry's charge. The first lieutenant told me this plan worked well, and saved much of that trivial reporting, which, though trifling, still so requisite in every vessel-of-war. I do not think this plan would work well in any vessel smaller than a large first-class frigate.

Look-out men.

It is not desirable to place look-out men as a punishment, as so much of the safety of the ship depends on their attention and watchfulness, more especially in these days of steamers. I have known several good officers who would not

on any account place men for punishment in the bows to look out, still make it a practice for slight offences, to make them look out on the quarters, and attend to hauling in the log line; however, in the present days of steamers, it would be well to be guarded on all points. If you make a man do any extra work for punishment, you will find it contrary to human nature that he should do it with the same zeal and attention that a man would who does it at his regular turn of duty; for this reason I should always consider it a risk to place any man for punishment in a very responsible situation.

On the arrangements of the watches by the watch-bill.

It not unfrequently happens, that if one watch should often perform the duties quicker or better than the other (if you notice the beaten watch closely after any evolution), you will find them grouped about the deck with a spokesman for each group, explaining the reason why they were beaten. They seldom blame each other, so much as what they are pleased to call the unfairness of the watch-bill: they say, though equal in numbers, they are not at all so in strength, and that they know several men in the other watch that are more than equal to any two men in their watch, &c.; of course this kind of conversation is always under the rose. I was midshipman in a frigate where the bickering about watches had been going on for some little time; we had a very fine ship's company, but had only been commissioned a short period, when the first lieutenant, an excellent officer, soon discovered what was going on between the watches, and put a most effectual stop to it, in the following manner.—The hands were turned up, the men were all ordered to stand on one side of the decks, beginning with the forecastle-men forward, then the foretop-men, and so on through the whole watch-bill. When this was done, the

watches were broken up; then the two captains of the forecastle were desired to stand out on the opposite side to their men; the captain of the forecastle of the starboard-watch took his first choice; the captain of the port-watch took the next, and so on until all the forecastle-men were disposed of; then came the foretop-men, the captains of the foretop taking their choice in the same manner until they were all disposed of, and so throughout the whole watch-bill. This method had a most beneficial effect, as it made the petty officers and the men work much better together, the petty officers feeling a greater interest in the men they had chosen, and the men feeling that the petty officers must have found some good quality in them from their choice. The above plan was followed up all the time I was in the ship, and found to answer well. It ought also to be mentioned that several skeleton watch-bills were previously prepared.

On the petty officers messing by themselves.

Many good officers are strongly of opinion that it would be beneficial to the Service, if the petty officers messed together, and leading men appointed to take charge of the messes, it certainly would place the petty officers in a better position for doing their duty. I think we expect too much, if we suppose, that when the petty officers and crew are mixed together in messes, that the petty officers can have the same power over the men as if they messed by themselves; it would then make the step from an able seaman to a petty officer more distinct; to this might be added leave, when it would be impossible to extend it to the crew. The petty officers should be exempt from all mustering of clothes, hammocks, clews, and lashings, &c. They should either take the head of their own men, according to the parts of the ship to which they belong, or all the petty officers should stand by themselves at divisions. I have been in ships where both these

plans were tried, and that of exempting them from all musters of clothes, hammocks, &c., and always found it gave the petty officers a higher opinion of their situation, and made them more anxious to keep their ratings. Instead of having the watches mustered by the midshipmen as usual, if you allow each of the petty officers to muster his own men, and then make his own report to the mate of the watch; this plan makes the petty officer feel the responsibility of his situation, and puts him in a better position in the eyes of the crew. I was in a ship where we tried this plan, and found it to answer well.

On wearing medals in the navy.

I have often thought that medals given to seamen by the government for long service and good conduct, or success in battle, &c., are generally almost useless, as far as the good example is concerned to the rising generation of seamen.

In the sister service, whatever decoration a soldier has gained, he is always seen to wear it. If soldiers were not expected to wear their medals, they would soon fall into disuse in the army. Men, generally speaking, from shyness, or not wishing to force themselves into notice, require an order to that effect, to enable them to wear their decorations, but without which order, they never will do it, more particularly sailors, who as a body, are shy in the extreme. Whoever the order emanated from relative to wearing medals in the army, deserves well of his country. This is acting on one of the strongest feelings of the human heart; he then feels and knows he is a marked man in his regiment, nay more, in his country. The very wearing of these medals is a great incitement to the young soldiers to serve well, and act nobly. The very reverse is the case in the Navy; for, in nine ships out of ten, if a sailor has received a decoration, showing that he has deserved well of his country, it is generally stowed away in

his bag, or in some snug place where it never sees daylight, except when he takes a good overhaul at his clothes, then perhaps some of his messmates get a sly peep at it.

On touching hats.

Some very good officers, to show a marked distinction between the working petty officers, and the other part of the crew, have given directions, that on those occasions on which the seamen generally pull off their hats as a mark of respect,—such as divisions, muster by the open list, &c., that the working petty officers shall then only touch their hats. A captain in the Navy told me he had tried this for several years, and though apparently a thing of little consequence, it had a very good effect in the discipline of the crew. I believe it will be admitted generally, that anything which will give a higher tone to the feelings of the working petty officers in the Navy, must be a most desirable point gained. The situation of the working petty officers is one of the highest consideration, as the best officers are of opinion, no ship can be in a high state of discipline without these valuable men; but with good petty officers, indifferent ships' companies have often been made into good and smart crews. None but those who have been obliged to do duty with an inferior set of petty officers, can tell the up-hill work the commanding officer has to contend with. The short period which our crews are with the same officers takes much from the steadiness of the petty officers and seamen.

On holydays in port.

Every officer who has had much to do with the management of men, may have observed, that on those days on which the crew have not their usual employment (Sundays excepted), the number of complaints generally increase. This I believe

is not applicable to seamen alone, but to all bodies of men who have very limited means of amusing themselves. These remarks are not made with the intention of curtailing the amusements of seamen, but on the contrary, to shew that the human mind will be occupied, if not usefully, or in some rational amusement, it will generally find employment in mischief and annoyance to others, hence arises quarrelling, fighting, &c. Every sort of orderly amusement should be given to the crew on those days, including leave on shore, if possible. Ships are frequently deficient of the music which Jack likes best—his favorite fiddle. We have often heard the sailors say, that it was no dance without a little cat-gut. If the seamen have such a liking for this instrument, would it not be desirable to have a rating for a fiddler on board of each of Her Majesty's ships having any stated number of men, with an allowance for a fiddle, and strings. This expense, a few years ago (I believe still) falls upon the senior lieutenant, or by subscription amongst the crew, therefore fiddle or no fiddle, according to fancy. The want of a good fiddler to a ship is a very great loss. A good fifer may do well, but the fife is not the favorite instrument with sailors; neither can the fifer play so long; and has many more excuses for not being able to play, such as sore lips, cold, weak chest, with many other *et ceteras*, which all those who have had these things to contend with, will know too well about. Look at the heavy work of catting and fishing anchors, hoisting topsails, &c. You could far better spare ten men in a full-manned large vessel, while doing this work, than the fiddler or fifer. Every one who has attended to the catting and fishing of an anchor, with or without music, must have remarked the spirited way in which an anchor is walked up with music, the men's feet keeping time beautifully to the tune. You have only to see the same anchor catted without music, to know the effect of the combination of force when applied, by keeping time to

music. We have known several very good senior lieutenants, who never would leave their ships on holydays given to the crew, well knowing that on those days it requires more forbearance and tact in the management of men than it does on working days; but we are sorry to say that it is too often the custom on such days, to pass the charge of the ship from one officer to another, until it is difficult to find out under whose command some of the orders have been given. By this means the charge of the ship, like most other charges intrusted to many, becomes very badly executed, consequently, a large list of complaints. Some officers disapprove of giving the crew leave to go on shore on Sunday; this feeling arises from a strong desire to keep the Sabbath Day holy. This feeling, like many others, may be carried too far. In the class from which we generally take our seamen and marines, their families cannot afford to lose a day's work, therefore they do not often meet for any length of time on any other day but Sunday. Those men who have wives, mothers, sisters, and brothers, &c., feel the restriction on this day doubly, and often get too much to drink in consequence; for as surely as you keep them on board, their relations will find some means of smuggling spirits into the ship for them. Boat sailing, as an amusement on Sunday, may be very pleasing to some few of the officers, but the seamen generally, dislike it extremely, between filling water, or other kinds of ballast, making and shortening sail, tacking, &c.; this is making a working day of it for many, with their best clothes on, for the fun of very few, besides the bad example of working men on Sunday about things which the Service does not require. We have known many officers give up one side of the main-deck on this day and holydays, with a clean white deck-cloth spread for the men to read and lounge on. On Sunday, the men's minds are fully occupied until after dinner; first comes the preparations for divisions, then the parade, next church, and

soon after, dinner; this takes up all the morning. After dinner it would be well to give the men every facility for reading, writing their letters, &c. The Author was in a ship in which the captain supplied a library of amusing books to the crew, long before libraries were allowed in the Navy. The books were given out every morning at sea, to the messes wishing to read them, and returned every evening, having been previously examined, to see that they were not torn, or in any way hurt. On Sunday, they were given out directly after dinner, and the men allowed to lounge and read on the deck-cloth, or in their berths, as they liked.

On the sleeping of the watch on deck.

The Author was in two ships, in which an old well scrubbed sail was spread on the starboard side of the half-deck every night at eight o'clock, for the watch on deck to lie down on. On first commissioning, until a sail could be procured, the sprit-sail was used for this purpose; this had the good effect of keeping all the watch together ready at a moment's notice. The reliefs for the look-out men were kept separately, and the reelers between the two after-guns on the opposite side, under the sentry's charge, so that they were called about five minutes before each hour by the sentry, to be ready to heave the log: by this means the watch was always kept together, and entirely free from exposure to the weather until wanted. The men's clothes were saved that zebra-like appearance which we so often see from the men lying athwart ships on the pitchy seams; in fact, their clothes are marked in every direction, where some precaution of this kind is not taken. It saves much noise, and is much healthier for the men, as should the deck be in the slightest degree damp, they will surely have a much better chance of not feeling its bad effects.

On the hands being turned up to dance, or to skylark.

I think I shall be borne out when I assert, that no orders should be given by the commanding officer to which he cannot demand the strictest attention: this being admitted, why continue to turn the hands up to dance, or to skylark, to neither of which orders the commanding officer can with justice demand obedience. Jack knows this very well, and where he has any cause of complaint, real or imaginary, and the hands are turned up for either of the above purposes, he says, "well, thank God, they cannot make us dance or skylark," or some observations of that kind: you cannot enforce obedience to mirth, therefore, perhaps it would be quite as well to discontinue the order for it. Whenever the Service, and weather will admit of it, as soon as possible after afternoon quarters, the musicians should be desired to play on one side of the main-deck (or where the commanding officer may think best); at these times, let it be perfectly understood that the men may dance, sing, or play; in fact, they should be allowed to amuse themselves to the full extent of what the discipline of the Service will admit. Few people pride themselves more on their dancing than Jack does; therefore, mind he has a good share of lights, that his steps may be seen. Many times have I watched the younger sailors on these occasions, going through their steps between the guns, or somewhere out of the way, for a year or two, before they would take upon themselves to show off before the crew. Those who fancy Jack has not a little pride stowed away in a stray corner, are perfectly mistaken. There are few officers who have not felt highly gratified when seeing dancing on the main-deck, songs in the tops and on the forecastle, and amusement in all directions. Some of the smartest officers I have ever had the pleasure of knowing, have encouraged dancing, singing, and playing, until the lights were put out.

Pigs.

The discontinuance of taking pigs on board ships of war, wherever it may have originated, has been one of great service in general. However careful you may be about the cleanliness of these animals, you cannot prevent numberless disagreeables which must always attend them, more particularly when in the confined space of a ship; but with a close day, a strong breeze, and all the ports shipped, it was then not very pleasant, nor do we suppose healthy for the crew. We have known the pigs to dispute the right to the manger with the fore-topmen, on many occasions, while working the cables.

But the part which would have been most disapproved of by the officers, had it been known generally to them, would have been, that those very pigs were fed in a great measure, by the ship's company. We have on several occasions heard it remarked by seamen, that they fed the pigs, but the officers ate them. We have seen much bad feeling produced, by these animals being made the medium of a black-list, in the following manner. The pigs were allowed to run about the decks just as they liked, so many pigs to each black-list man, and if the pigs made any mess about the deck, the black-list men, provided with swabs, shovels, and brooms, were obliged to clean after them.

Sick men.

Nothing can exceed the improvements which have succeeded each other for bettering the condition of the sick in ships of war; still, in vessels which have no sick-bay, the appearance of the main-deck is sometimes too much taken into consideration, when one side of the aft-deck would be of the greatest benefit to some of the worst cases on the sick-list, more particularly during summer, or in tropical climates.

When a commanding officer can carry out the suggestions of the surgeon, everything in that department will be more likely to work well, and give increased comfort to the sick generally. On going on board a vessel not having a sick-bay, and knowing that sickness prevails on board, it would rather surprise a person acquainted with the capabilities of frigate-built vessels generally, to see the aft-deck not employed for that purpose, as it would occur to him, if the sick were not under the aft-deck in frigate-built ships generally, in a warm or tropical climate, that they must be very badly lodged in one of the cock-pits, or on the nearly equally heated lower deck. The aft-decks should have at least two neatly made screens for this purpose; they should not reach to the main-deck within eighteen inches or two feet, to admit of a free ventilation. The screens should hook and unhook at pleasure; and having two for that purpose, would always insure a change sufficiently quick to prevent even the appearance of being soiled before changing. The practice of nailing these screens when wanted, cannot be considered a good one. Neat strong beckets should be worked, for the purpose of hooking them on, and the hooks should always be kept in their places. We have seen all the aft-deck ports fitted with glass sashes, besides their proper half-ports, the sashes having a proper stand, and kept under the sentry's charge, at the captain's cabin-door, so that when the aft-deck is obliged to be used for the sick, those sashes add very much to their comfort, as they can then have light when it is found requisite to shut out either wind or rain, &c. These sashes are also most useful on many occasions, but next to that of usefulness to the aft-deck when used for the sick, is when obliged to have church under the aft-deck in cold or rainy weather. When the surgeon thinks it requisite to place a sick man under the aft-deck, he then has a much better chance of attending to the sick man's diet and comfort. Many sailors have a strong conviction that

grog will cure all diseases; hence the necessity of a sentry over the sick-bay, besides that of preventing the sick obtaining things to eat forbidden by the surgeon. We have often known the surgeon to consider it desirable for some of the convalescent to go on shore for a little change of air and exercise; and this may be suggested by the surgeon when no leave is given to the crew, and with proper precaution, we have known it do extremely well. In ships with no sick-bay, we have known the following plan to answer, being particularly requested by the surgeon, namely, to have a screen sufficiently large to take in between two guns on the fore part of the aft-deck, so that the sick might be seen there night and morning; this gives the surgeon a better opportunity of examining his patients by daylight, instead of extremely bad candle-light. We have seen this done for years, in warm climates, two screens being allowed for that purpose, and changed every week.

Amusement.

The isolated and confined space of a vessel of war necessarily limits the amusements of people on board ship to a narrow compass, therefore, the more officers can have recourse to every species of rational amusement for their ships' companies during their leisure hours, the more happy and healthy they will be. It has often been remarked, that those ships which have the most amusements, and those of the most rational kind, for their crews, are generally the most contented, best behaved, and the smartest ships. The human mind will be employed, therefore, it must be desirable to insure its taking a right direction as much as possible, by giving it rational amusement. If a watch, or part of the crew, could be landed, whenever circumstances would admit, to let the men have a few hours' recreation at cricket, quoits, and many other sorts of games, &c., it would add much to

their health and cheerfulness, and do much towards getting the ship's company into the habit of going on shore for health and recreation, without committing excesses. After the usual exercises of the day are over, in ships that are approaching to order, there would generally be plenty of time for an early tea; and then let one watch go on shore for some amusement, reserving their grog for them until their return to the ship: in the long summer days, this might be done very easily; and I have every reason to believe, that if too much stress were not generally laid on top-gallant and royal yards, and boats, &c., at sunset, officers would much oftener give the men a few hours' recreation on shore, by way of giving them a bit of fun to break through the monotony of a ship. You will always find some place a little out of the town or village, or some small island, where the men can take the benefit of the recreation here mentioned. I have seen this plan often tried, and after a little time, nothing could possibly work better.

Remarks on the working room on the upper deck of a ship of the line.

In ships of the line, those evolutions which do not require many men aloft, might often be equally well or better executed, and perhaps with less noise and confusion with the watch, than with the hands on deck; such evolutions as tacking or wearing in moderate weather, crossing top-gallant yards, when the sails are not bent, &c. The working room on the upper deck for the crew of a ship of the line is so confined, when compared with the number of her crew, that except many men are employed aloft, she really has not room to give full force to their exertions. As her crew are proportioned to the number of her guns, she must be crowded on her upper deck, according to the number of her gun decks, when the hands are turned up for any evolution in which they are employed on the upper deck. The

spars, rigging, and sails of a ship of the line, bear no proportion to her crew, when compared with other ships, therefore, in every thing relative to masts, yards, sails, &c., she is overmanned in comparison with frigates and flush vessels, while the latter vessels have a great advantage over ships of the line, from the crews having more space to work well in. We should think there could not be the slightest doubt of the wisdom of proportioning the number of men to the number of guns as much as possible; still, let a ship of the line and a flush vessel execute any evolution in which many men are required aloft—for instance, let the two vessels furl sails together; in this case, the ship of the line will have her decks perfectly crowded with men, while the flush-decked vessel will hardly have men enough on deck to let go her ropes and attend to the men aloft, and perhaps even be obliged to stow her head-sails after her square-sails have been furled. When there are many things to be done at the same time, a ship of the line, for these reasons, has a great advantage over all other vessels; for instance, she can unmoor with one watch; she may have one watch at quarters, and work ship in cases of the greatest emergency, with the other watch. She can send all her boats away on service, and still be well manned in proportion to her spars, which no other vessel would be: and generally speaking, as the vessel becomes smaller, the disadvantage increases. The crew of the small-class frigate, we think, ought to have the best chance of becoming smart aloft; the seamen in large ships having to manage spars so much larger, consequently more difficult in every way to handle. Whatever can be done by one man, will be more likely to be done better and quicker, than when it requires two or three. In large ships, for instance, it takes two men to tie the reef-points on the quarters of the topsail-yards, therefore, in ships where the yards are sufficiently small to admit of both legs of the same points being tied by the same man, it

must give a considerable advantage to that ship. The upper deck of a ship of the line is so small compared with her crew, when her hands are all on deck, that there should always be a good reserve of men on each side of the main-deck, to run away with any ropes that may be required.

The dirty work of a ship.

The more the dirty work of a ship is done in sight, the more it will add to her real cleanliness. The dirtiest parts of vessels generally, are those which add so much to her apparent cleanliness, namely, stow-holes, but unless these are well looked to, they give the crew the habit of stowing away wet swabs, dirty clothes, &c., and many other things too numerous to mention, that often create foul air in the ship, more particularly in tropical climates. Perhaps there are few people so fond of stowing away things as sailors, therefore their stow-holes increase very fast, if permitted. Even in the way of cleaning guns and arms, if you do not have bags for the men of each gun to put their polishing-cloths in, every hiding place about the ship will be employed for that purpose, even fire-buckets, muzzles of the guns, &c., will not be excepted. If the first and second captains of the guns are allowed a canvass bag each, it will at least much reduce the number of places for keeping the cloths so used, to the number of guns, instead of each man having his separate stow-hole. The mere stow-holes for the cloths which the men clean their guns, arms, and wood-work with, is a very minor part, still we think it necessary to mention the subject. When things are stowed away under hatches merely to be out of sight, there will be much reason to believe that many things are put away that ought to be kept handy. The more a ship becomes a polishing ship, the more she will increase the number of stow-holes for dirty rags, &c. Few things accumulate faster than tar-buckets on board ship, and if you allow as many as

the different parts of the ship think they want, you will have no end of tar-buckets. I tried the following plan for several years, and found it answer well. A small copper tar-bucket was made for each part of the ship, with the name of that part engraven on it; each part had a proper place to hang up its tar-bucket: the last man who used it was always obliged to hang it up, perfectly free from tar on the outside of the bucket.

Every ship should be her own dock-yard, as much as possible.

There are many officers who so manage the resources under their command while at sea, that on the arrival of their ships in port (excepting they have met with accidents from gales of wind, &c.,) seldom require anything from the dock-yard beyond their stores to complete, or perhaps a spar, or something in the small way, which they make themselves, therefore, after they have completed their provisions, water, &c., they are ready for sea, if required immediately. Perhaps two vessels may have been cruising together, and gone as near as possible over the same ground, and encountered the same weather, still, one ship will have a long string of defects, and the other will have almost nothing to be done by the dock-yard; and this arises in a great measure from every little defect being made good as it occurs, in one ship, and in the other, being left to be done by the dock-yard. If a ship of war do not meet with serious casualties, her artificers are generally sufficient to keep her in a complete state of efficiency, without having recourse to the dock-yard beyond completing her stores at stated periods. On many foreign stations, the vessels employed on those stations have nothing but a store-house to supply their wants from, still, generally

speaking, those vessels do nearly as well as if they continually had a dock-yard under their lee; yet many of those ships which manage very well without continually having recourse to a dock-yard, would soon be full of wants if they had one at hand. When it is generally known how much vessels do for themselves on stations where there are no dock-yards—and when it is considered that stations wanting this accommodation are generally the most distant ones, and in consequence of this increased distance, that they are generally much longer from England, or any dock-yard, it shows plainly what can be done with the resources of a ship-of-war. If the carpenter is on the alert, a ship will seldom require a general caulking, as he will continually be on the look out for soft seams, &c. If the defects about the ship and boats are made good as soon as they occur, much valuable time will be saved; as, if this is not done, the carpenters are too often employed about trifles, or even sometimes, things not connected with the ship. From care and attention in some ships during bad weather, hardly a rope will be chafed, while in other ships, where the same care and precaution have not been taken, much injury will often be done to the standing and running rigging for the want of attention to chafes, &c.; and these chafes will frequently extend themselves to the sails, more particularly to the courses when reefed or furled, from pressing against the lower stays. When a suit of sails have been much worn, endeavour, if possible, to finish wearing them out during the fine-weather season. Sails should be repaired immediately after any accident, as upon the principal sails of a ship, in blowing weather, depends her very safety: and it is generally very bad management to begin to repair sails when they are actually wanted. There cannot be a doubt that the seamanlike way of furling topsails in harbour is, first to take in two good reefs, and then furl the sails; this gives you snug canvass to make sail from at once, and divides

the sails more equally on the yards when furled; but when you have much exercise of sail-furling, it would be well to overhaul the topsails before going to sea, as between the second and third reefs the topsails are often much more worn than any other part, from this practice, and consequently often split about that part of the sail. Some good seamen are of opinion, that if the topsails were made of stouter canvass from a little above the fourth reef, throughout the lower part of the sails, that it would make them better able to encounter gales of wind. What I wish to express by every ship being her own dock-yard is, that nothing can require more continual attention than a ship, and where that attention is paid, general repairs of every kind are very much diminished.

Sprinkling decks.

Instead of sprinkling the decks as it is commonly done, from a bucket, it will be found preferable to have finely pierced watering pots for this purpose; by this means, you will have your decks equally, and nicely watered, while painting, or before sweeping the decks, and they are highly useful in cooling the decks in hot climates.

On giving certificates.

It would be desirable, that great caution should be observed before the word "indifferent" is put to a man's certificate, as, when this term is made use of, a seaman can seldom get employed again, without great difficulty, that is, if he show his certificate. So well do men-of-war's men understand this, that they frequently make away with their certificates, when the word "indifferent" is attached to them. I have, on several occasions, asked seamen, when speaking of the loss of their certificates, to tell me candidly what they had done with them; their answer has often been, "that on board such and

such ships, they had got a little too much grog before paying off, &c., and that in consequence, "indifferent" was put on their certificates;" and as they well knew the difficulty of re-entering under such circumstances, they had destroyed them. Seamen wishing to become riggers in either of H. M. Dock-yards, are also rejected from the same cause. No doubt the Admiralty are perfectly right in keeping such places entirely for the best conducted seamen in Her Majesty's Service, and so are captains, in keeping everything in the shape of bad or indifferent characters out of the Service. All I wish to remark is, that as the word "indifferent" on the men's certificates bears such a strong interpretation, too much consideration cannot be given previous to its insertion.

Clothes found lying about the decks.

It does not appear consistent with justice or good order, that any one on board should have the power to throw overboard, or otherwise destroy, clothes found lying about the decks. Where this improper license is given to the mates of decks, master-at-arms, &c., it produces much bad feeling and discontent. All clothes &c, found lying about the decks, should be given into the charge of the master-at-arms, and all clothes, &c., not marked, should be put in a bag supplied to him for that express purpose. Once a week, or oftener, the contents of this bag should be examined in the presence of the senior lieutenant, the word having been previously passed during breakfast time, to insure everybody hearing it, that the contents of the bag of mislaid clothes will be ready for the inspection of those who have lost anything, and mentioning the exact time that they can be seen; and if there should be any boats' crews away, or men otherwise employed out of the ship at the time, and any clothes still unowned when they return, they should be shewn them. With all the pains you can possibly take to keep the ship's company's clothes

marked, with every facility given for marking them, still, from continually making new clothes, chopping and changing, and marks wearing out, it requires constant care and attention to obtain the desirable object of keeping their clothes properly marked. Great allowance should always be made for the boats' crews, if their clothes are at any time found lying about, as these men have no command over their time; the moment their boats are called away, they are obliged to leave whatever they may be about, consequently their clothes often fall into the hands of other people to take care of. Unavoidably washed clothes are often piped up or down when boats' crews are away; and there are numberless reasons why the boats' crews have not an equal chance of taking care of their clothes with the other parts of the ship's company. If the senior lieutenant strictly attend to this duty (viz., the inspection of the clothes found lying about), this practice will soon diminish, as the very chance of being often brought before the senior lieutenant, will tend much to make the men more careful. When clothes are thrown overboard because found lying about the decks, the ship's company submit to it with a bad grace, as they feel that it is might which rules in the absence of right, justice, and good order.

*Upon dead-eyes, hearts, and thimbles.**

The power gained by dead-eyes, hearts, and thimbles, is as the number of parts of the laniard that is rove through them; but if the laniards be not well greased, their power will be mostly, if not entirely counterbalanced by the friction they are subject to. This being the case, they are never applied as purchases, but merely for the better keeping the quantity gained of any shroud or stay when set up. For if a shroud or stay were set up without their application, the quantity lost upon making fast would slacken the shroud by the same quantity; but when a dead-eye and laniard are fixed to the

* Gower.

shroud, should even six inches of the laniard be lost while making fast, the shroud would be slackened only one inch, for there are six parts of the laniard to the shroud, and as the shroud is equally held by each part, it can only be slackened by the quantity that the parts of the laniard are lengthened.

For a boat to ride out a gale under the lee of a spanned spar.

On speaking to a very experienced seaman some time since, the captain of a merchant vessel, he told me he was once in a very heavy gale of wind, in which he was obliged to ride his boat under the lee of a spanned spar, with this exception to the general way of doing it—the boat's mast had a large sprit-sail attached to it; this sail was left on the mast, the luff having been previously well tautened along the mast; a span was then attached to the boat's mast, and a small weight made fast to the spar; by this means, as the boat's mast drifted, the sail spread itself on the surface of the sea, and as the heavy waves rolled along, they expended themselves by rolling the sail up, and as the boat dragged the spar again, so the sail spread itself ready to receive the next sea, and in this manner the boat rode out the gale in the most perfect safety. Attaching a small square-sail to the spar you ride your boat to, appears well worthy of consideration.

BY PERMISSION.

Extracts from a copy of Rear-Admiral Hyde Parker's report to the Admiralty.

PORTSMOUTH DOCK-YARD,
31*st March*, 1846.

SIR,

In compliance with their Lordships' directions of the 21st January last, I have had made a set of Signal Balls on Capt. Liardet's plan.

On the 28th inst., the first trial was made of the Balls, covered with buntin, from H. M. Ship *Superb*, at Spithead, to the Victory in the Harbour. The weather calm, overcast and cloudy; several signals were made, and answered very quickly, and the colour of the balls easily distinguished.

Second trial on the 30th inst., from the *Victory* to the *Superb*, at Spithead; wind moderate, from S.E., and very hazy. Eight signals were made of three balls each, and were answered almost instantly, the numbers agreeing exactly in each ship.

I am of opinion, that these Signal Balls, invented by Capt. Liardet, will be found, in calm weather particularly, in communicating with steamers, to be of the greatest advantage.

I am, Sir,

Your most obedient Servant,

HYDE PARKER,

Admiral Superintendent.

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